

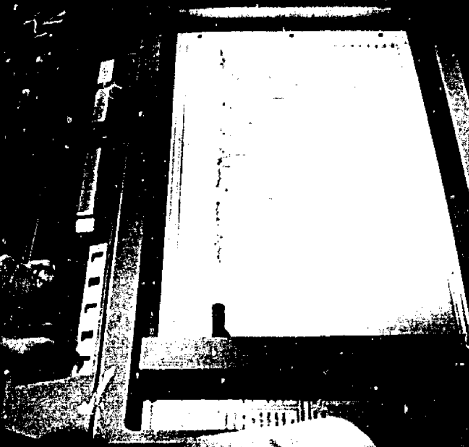
GAF

GAF  
CORPORATION

ANNUAL  
REPORT  
1978

G034000

12/31/78



# Table of Contents

<b>2</b> Message to our Shareholders	<b>22</b> Review of Consolidated Financial Information	<b>28</b> Consolidated Balance Sheets
<b>4</b> Chemical	<b>25</b> Summary of Significant Accounting Policies	<b>30</b> Notes to Consolidated Financial Statements
<b>8</b> Photo & Repro	<b>26</b> Consolidated Statements of Income	<b>35</b> Auditors' Opinion
<b>12</b> Building Materials	<b>27</b> Consolidated Statements of Changes in Financial Position	<b>36</b> GAF Products and Services
<b>16</b> International		<b>37</b> GAF Locations
<b>17</b> Corporate		
<b>21</b> Directors and Officers		

## About the cover:

The billion dollars in sales GAF achieved in 1978 covered a spectrum of high quality products. The company goes to considerable lengths to maintain quality for all its product lines. A GAF scientist at the Wayne, N.J., research laboratory uses a nuclear magnetic resonance spectrometer to look for impurities which could affect performance.

This report shows some of the other quality tests, some sophisticated, some simple, used to check sales products to make sure that when customers buy from GAF, whether it's a toy or a tank car of chemicals, they get the best the company can make—consistently.

# Financial Highlights

	1978	1977
<b>Net Sales</b>	<b>\$1,063,291,000</b>	\$919,541,000
<b>Income from Continuing Operations</b>	<b>\$ 30,399,000</b>	\$ 26,193,000
<b>Income (Loss) from Discontinued Segments</b>	<b>3,765,000</b>	(73,150,000)
<b>Net Income (Loss)</b>	<b>\$ 34,164,000</b>	\$ (46,957,000)
<b>Earnings per Common Share</b>		
Primary		
Continuing	<b>\$ 2.01</b>	\$ 1.70
Discontinued	<b>.28</b>	(5.52)
Net Income (Loss)	<b>\$ 2.29</b>	\$ (3.82)
Fully Diluted		
Continuing	<b>\$ 1.76</b>	\$ 1.52
Discontinued	<b>.21</b>	(4.20)
Net Income (Loss)	<b>\$ 1.97</b>	\$ (2.68)
<b>Cash Dividends per</b>		
Preferred Share	<b>\$ 1.20</b>	\$ 1.20
Common Share	<b>\$ .64</b>	\$ .60

\*Restated to exclude amounts applicable to discontinued segments—See Note 1 of Notes to Consolidated Financial Statements

## Shareholders Information

**The 1979 Annual Meeting of Shareholders will be held at 10:00 a.m., Tuesday, April 24, at the Colonnade Hotel, 120 Huntington Avenue, Boston, Mass.**

Stock Transfer Agents and Registrars:

Citibank, N.A.  
111 Wall Street  
New York NY 10015

First Jersey National Bank  
One Exchange Place  
Jersey City NJ 07303

Form 10-K as filed with the Securities and Exchange Commission may be obtained, free of charge, by writing to:

GAF CORPORATION  
140 West 51 Street  
New York NY 10020

Investor Relations

GAF offers holders of its common and preferred stock the opportunity to buy additional shares through an automatic dividend re-investment service, administered by Citibank, N.A.

## Message to our Shareholders



**President Philip B. Dalton and Chairman Dr. Jesse Werner**

In 1978, GAF sales from continuing businesses were \$1,063.3 million, with after tax profits of \$30.4 million, compared with 1977 sales from continuing businesses of \$919.5 million, with profits of \$26.2 million. (These figures exclude activities of the business forms operation, which is being sold.)

This 16% increase in earnings is particularly encouraging in that 1977 earnings were helped by non-recurring income totaling \$3 million after taxes.

In 1978, earnings were depressed by start-ups and related expenses of four major facilities, each involving significant costs, with limited offsetting sales. These had a negative impact on 1978 earnings of approximately \$5 million after taxes. This impact is expected to be much lower in 1979.

GAF is still in its three basic businesses—chemicals, photo & repro and building materials. The redeployment and streamlining program begun in 1977, which occupied much of management's

attention in 1978, was designed to eliminate several businesses which were either not profitable, lacked profit potential, or did not integrate well with GAF's remaining businesses—but not to change the inherent structure of the company.

In 1978, Chemical worldwide sales were \$248.8 million, with direct operating profits of \$50.6 million. These compare with \$200.9 million in sales in 1977 and direct operating profits of \$45.5 million. The 1977 Chemical profits included receipt of a non-recurring payment of \$3.7 million before taxes, related to a contract termination. Without that one-time payment, earnings from operations increased 21% in 1978.

Photo & Repro profits improved dramatically in 1978—\$11.7 million on sales of \$280.8 million, compared with \$3.4 million on sales of \$244.4 million in 1977. These direct operating profits are the highest achieved for GAF's present photographic and reprographic product lines in 10 years.

In Building Materials, 1978 sales stood at \$533.7 million, an almost 13% increase from 1977 sales of \$474.2 million. Profits, however, were \$39.5 million, a slight decline from 1977 operating profits of \$41 million. There were three major new building materials manufacturing operations in start-up during 1978—in Mullingar, Ireland, Joliet, Ill., and St. Louis, Mo.—with added costs which had not yet been offset by added production and sales. These combined to depress earnings. However, the new sheet vinyl flooring plant in Ireland had begun to produce in substantial quantities by year-end and shipments are increasing. The urethane insulation operation

in St. Louis had completed some trial runs by year-end and very limited shipments were possible. The Joliet facility for automotive sound-deadening paddings and advanced mastics is also in start-up and very limited shipments have begun.

The joint-venture chemical plant in Marl, West Germany, went through a smooth start-up and was operational by mid-year. Start-up of the plant did depress 1978 earnings, but sales and production during the last quarter of 1978 showed substantial improvement.

The new THF solvent manufacturing unit at Linden, N.J., is operating very effectively. Production was increased during the year to meet growing sales success. Modifications made at the Texas City acetylene derivatives plant have enabled GAF to manufacture superior quality butanediol. The expanded PBT facility in Calvert City, Ky., is in the final stages of start-up and is producing and shipping quality product in increasing quantity. Sales are rising as more customers, particularly in the auto industry, find use for Gafite® PBT in replacing metals in many applications.

### **New Belgian facility**

Operations at the new plant in Sint-Niklaas, Belgium, were in large measure responsible for a rise of more than 30% in international sales of x-ray and graphic arts films, papers and photographic chemicals, and a rise of more than 15% in View-Master® and Pana-Vue® pictorial products sales. This plant had unused space for part of the year. That space has now been put to excellent use as a European distribution center for GAF building materials.

The Binghamton, N. Y., photographic plant increased production of continuing product lines at high quality standards, through consolidation, streamlining and product changeovers. The company's graphic arts and x-ray products produced there are carving significant niches for themselves in these markets, with sales and profits showing rising trends.

#### **Capital investment high**

GAF's investment in the future continues. Capital investment was high in 1977 and 1978—more than \$50 million each year—and 1979 plans call for a similar amount to be spent on such projects as a glass mat manufacturing facility in Chester, S.C., a roofing plant in Fontana, Calif., an over-all expansion of the company's mineral granules production capacity, a THF manufacturing operation at the joint-venture chemical plant in West Germany, a formaldehyde plant at Texas City, Tex., and a new acetylene derivatives plant in Seadrift, Tex.

At the beginning of 1978, GAF was in transition. The company had earlier embarked on a major asset redeployment program, through which several businesses would be sold and others would be strengthened.

This program has been proceeding in an orderly fashion. The part of the program dealing with selling discontinued businesses is virtually complete. The final phase—selling GAF's business forms operation in Shelby, Ohio—is in an advanced stage as this report goes to press. In all, \$43 million in cash has been generated by the sales and liquidations thus far, plus approximately \$7 million in deferred payments.

As the prices realized were somewhat greater than had been initially estimated, in the third quarter of 1978, \$1 million after taxes were taken from the reserves which had been established to cover the costs of disposing of discontinued businesses and restored to earnings. Following a review of tax benefits associated with the discontinued businesses, an additional benefit of \$2 million was recorded. Including that benefit and the operating income of Shelby, discontinued businesses showed after tax income of \$2.5 million in the fourth quarter, compared with a loss of \$13.9 million in fourth quarter 1977. For the year, after tax income was \$3.8 million, vs. a loss of \$73.2 million in 1977 (See Note 1 on page 30).

#### **Good cash flow**

The cash realized through the sales was used to reduce debt. In fact, in the third quarter of 1978, GAF was able to eliminate short-term domestic debt entirely. Furthermore, GAF's cash position was such that the company was able to go into the short-term money market as a lender, with the cash surplus generating more than a half-million dollars in interest income.

But the purpose of the asset redeployment program was not merely to sell off discontinued businesses and generate cash. It was to strengthen the company's remaining operations and improve over-all performance. This aspect of the program proceeded well in 1978, and by the third quarter of the year had been successful enough for the company to increase its quarterly dividend on common stock from 15¢ to 17¢. As our 1978 earnings demonstrate, this improved performance is continuing.

#### **Lawsuit against Kodak**

Another significant factor on GAF's horizon is the company's antitrust suit against Eastman Kodak. As we reported to you last year, we are encouraged by the federal district court finding in a similar case brought against Eastman by Berkey Photo Inc., in which the judge and jury determined that Eastman had violated antitrust laws in several ways. As expected, the case is being appealed. Pretrial proceedings in GAF's case are substantially complete and we expect our case to be heard shortly after the federal appellate court rules on that appeal. In the meantime, GAF is concentrating its energies on continuing improvement in its continuing businesses.

The year recently ended was a good one, with sales and earnings improvements and operational improvements. But no one at GAF ever said all the company's problems are behind it. There is still much to be done in product development, marketing and manufacturing improvement before the company achieves its full potential. We do feel, however, that the achievements of 1978 show that GAF is on the right track.

By Order of the Board of Directors.



Jesse Werner  
Chairman and  
Chief Executive Officer



Philip B. Dalton  
President and  
Chief Operating Officer

February 15, 1979

# Chemical



**Top:** Recent modifications at Texas City chemical plant enable GAF to make superior quality butanediol.

**Above:** Laboratory technician uses sophisticated spectrometer to analyze purity of GAF acetylene derivatives.

**Opposite:** On-the-spot visual checks are performed on a regular basis during the manufacturing process.

## Results (continuing)

(Dollars in Millions)	1978	1977
Net Sales	\$248.8	\$200.9
Direct Operating Profit*	\$ 50.6	\$ 45.5

\*Excludes General Corporate Expenses

Worldwide Chemical sales were \$248.8 million, up 24% from 1977 levels of \$200.9 million. Operating profits for 1978 were \$50.6 million, compared with \$45.5 million in 1977, an increase of 11%.

In the U. S., results were encouraging, with sales up significantly and profits almost the same as in 1977. That year's results, however, included a one-time payment to GAF of \$3.7 million before taxes from a contract termination. International chemical sales and profits were significantly ahead of 1977.

## European plant on line

The company's joint-venture acetylene-based chemicals plant in West Germany completed its start-up phase and is now fully operational. Sales of butanediol being manufactured there are increasing.

Butanediol is a basic building block for GAF's entire family of acetylene derivatives. It is sold to other companies as well, who use it to make high quality polyurethanes and polyesters. Already a leading producer of butanediol, GAF is taking several steps to reinforce its position.

Modifications made during 1978 at the Texas City plant have enabled GAF to make a superior quality of butanediol. Also at Texas City, construction began on a new formaldehyde manufacturing facility. GAF now purchases the formaldehyde needed to make butanediol at Texas City.

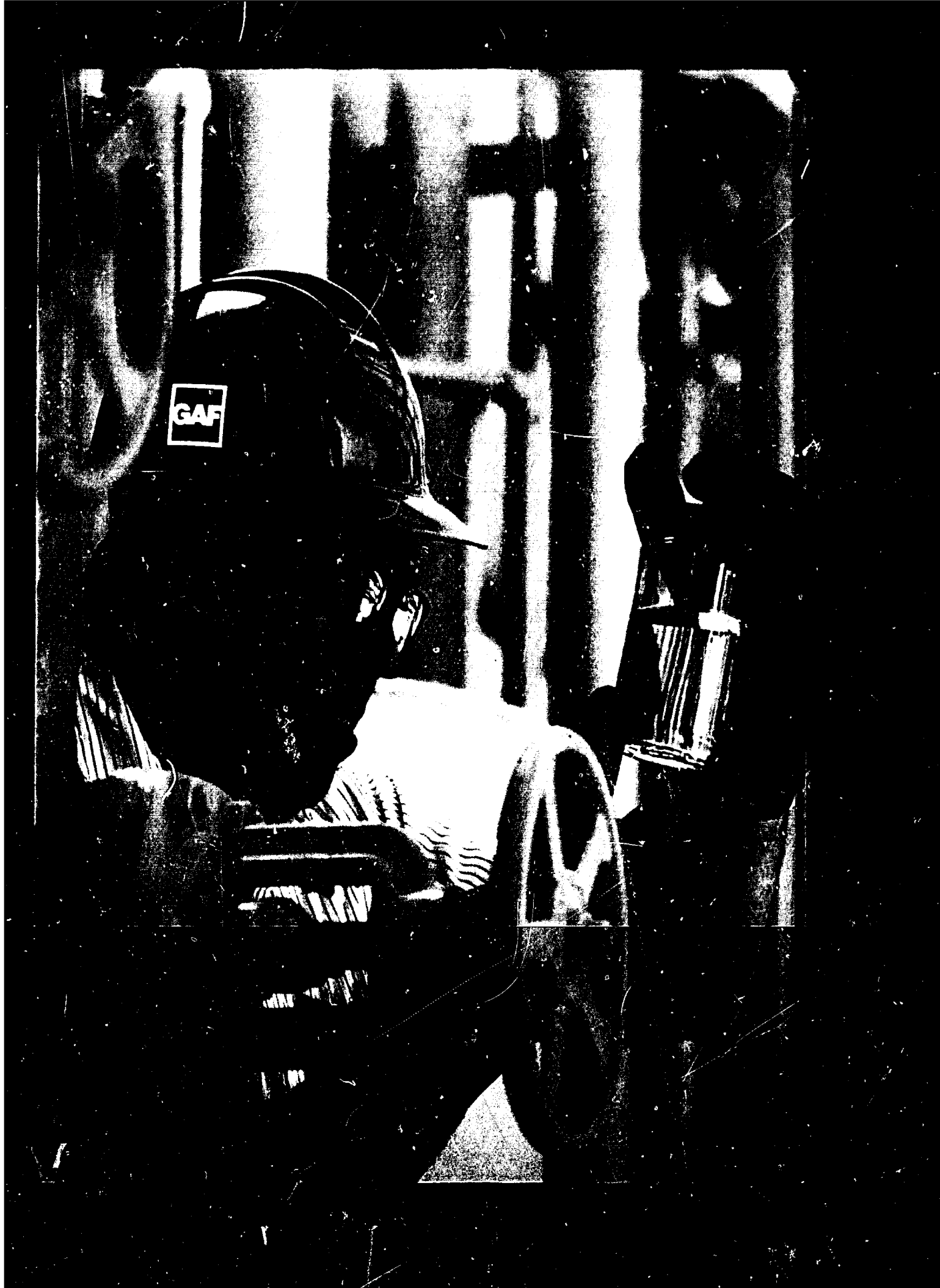
When completed, this new operation and the formaldehyde plant at Calvert City, Ky., will supply all the company's anticipated domestic needs.

The company announced in early 1979 that it would build a new acetylene derivatives manufacturing plant in Seadrift, Tex. To supply this facility, a long-term contract has been signed with a vendor to furnish acetylene at favorable prices, ensuring raw materials needed for future growth.

Manufacturing capacity for THF (tetrahydrofuran) solvent, made at Linden, N.J., increased approximately 75% during 1978. Sales of this recently added product, a butanediol derivative, have been very strong. Although GAF has been making THF in commercial quantities for only two years, start-up costs have been offset and the product was selling at a profit by mid-year, well ahead of initially estimated schedules. To increase manufacturing capacity for THF still further, a new THF manufacturing operation is being added to the joint-venture facility in West Germany. THF solvent is used in making vinyl products, magnetic tape, and is a basic ingredient in PVC cement.

## Engineering plastic

Gafite® PBT (polybutylene terephthalate), GAF's first engineering thermoplastic, is also butanediol based. A more flexible grade was introduced and used last year for automobile electrical connectors. New, low warp grades are being offered as well. The company is relatively new in this market, with its Calvert City, Ky., PBT manufacturing operation in production for one year, and the product is still in the early stages of customer evaluation. Sales in



1978 were encouraging and the company foresees a sound future for this line. Modifications at the Calvert City plant begun in 1978 will, when completed, substantially improve GAF's production capacity for this plastic.

Other butanediol-based GAF chemicals continued to sell well.

Sales of BLO® (butyrolactone) solvent rose substantially in 1978. Used as an intermediate and as a solvent in agricultural and other chemicals, BLO solvent is particularly attractive in agricultural formulations, as it has a U.S. Environmental Protection Agency exemption.

#### **M-Pyrol® solvent sales up**

M-Pyrol® (methylpyrrolidone) solvent is another important GAF chemical based on butanediol. In addition to uses with vinyls, acrylics and urethanes, M-Pyrol solvent is used in petroleum refining during lube oil extraction. The rising sales trend experienced in 1977 continued in 1978.

The company's PVP (polyvinylpyrrolidone) copolymers sold well in 1978, matching 1977 results. PVP has many applications in the cosmetics and pharmaceuticals industries. One of the copolymers, Polyclar® adsorbent, is used by wine, beer and fruit juice manufacturers as a clarifier and stabilizer.

Gantrez® copolymers have a broad range of applications, from hairspray resins to anti-spotting ingredients in dishwasher detergents. Sales were above 1977's record levels, largely due to increased hairspray utilization. Gantrez resins adapted well in the transition from fluorocarbon-based sprays to manual pumps and other aerosols now used by the cosmetics industry.

In other areas, promising new

products were added to GAF's specialty chemicals and surfactants. GAF specialty chemicals are used as antioxidants, sequestrants, iodophors, flame retardants and textile auxiliaries. Surfactants are used in detergents, paints and other applications. Sales were up significantly in these areas, although profits were restrained by raw material price increases. These markets are highly competitive and the company was not able to pass all increased costs along to its customers.

Styrene-butadiene latex also finds its major uses in very competitive, price sensitive markets. With a new latex for non-woven products, introduced in late 1978, GAF hopes to compete effectively against expensive acrylic latices in a number of applications. Initial market reaction has been good. GAF's penetration of the paper industry, where latices are used as coatings, improved in 1978.

GAF's agricultural chemicals enjoyed solid sales growth in 1978. Recovering from low sales in 1977 and 1976, chemicals which GAF manufactures for others under private label arrangements sold well in 1978. Sales of Cepha® plant growth regulator, a product GAF markets which is used to ripen crops such as tomatoes, remained at 1977 levels. GAF continues to synthesize new products and experiment with various agricultural applications, and management sees good potential in this market.

#### **Mineral granules rising**

The company has embarked on a program to increase mineral granule manufacturing capacity to keep pace with rising sales volume. These granules are used by the roofing industry to manufacture shingles. GAF has granule production facilities in New Jersey, Pennsylvania, Missouri and Wisconsin.

#### **Chemicals**

Acetylene Derivatives  
Agricultural Specialties  
Intermediates  
Iron Powders  
Latex Polymers & Compounds  
Monomers  
Polymers  
Solvents  
Specialty Chemicals  
Surfactants  
Textile Chemicals

#### **Engineering Plastics**

PBT Thermoplastic Molding Compounds

#### **Mineral Products**

Gasketing Materials  
Industrial Noise Control Products  
Mineral Granules



**Above:** Precise color blending of mineral granules for roofing is first performed in l/b, then transferred to manufacturing to ensure product uniformity.

**Opposite:** New agricultural chemical formulations undergo rigorous testing by independent researchers prior to becoming products. Here, light and heat levels are measured in controlled greenhouse experiments.





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**Top: Film manufacturing process is carefully monitored by complex instrumentation on a second-by-second, foot-by-foot basis to assure quality and uniformity of the film's sensitized surface.**

**Above: Randomly selected samples of diazo microfilm from every batch made receive visual inspection in addition to instrument checks conducted throughout manufacturing.**

**Opposite: Densitometer is used in quality check of x-ray film. Numerous precise criteria must be met before film is judged acceptable.**

<b>Results (continuing)</b>		
(Dollars in Millions)		
	<b>1978</b>	<b>1977</b>
Net Sales	<b>\$280.8</b>	\$244.4
Direct Operating Profit*	<b>\$ 11.7</b>	\$ 3.4

\*Excludes General Corporate Expenses

In 1978, GAF's worldwide Photo & Repro operations attained sales of \$280.8 million, up 15% from 1977 sales of \$244.4 million, and recorded the highest direct operating profit in 10 years — \$11.7 million. These earnings were almost 250% higher than 1977 profits of \$3.4 million. The figures for both years exclude GAF's business forms operation, which is being sold.

The Photo & Repro segment was the GAF area most heavily affected by the asset redeployment program. Progressing from low direct operating profits in 1976 and slightly better earnings in 1977, Photo & Repro made an appreciable contribution to the company's profits in 1978.

### Strong growth potential

These earnings result from GAF's concentration on product lines with strength and solid potential growth. The company's Gafmed® line of x-ray film, processing chemicals, cassettes, intensifying screens and other hardware is a case in point. The line now includes state-of-the-art products, such as SR/1 and SR/2 x-ray films. SR/1 film is designed for wide latitude medical radiography. This film has unusual contrast characteristics, which enable it to show greater detail in low density areas being studied, such as soft tissue. SR/2 is a general purpose x-ray film. Because of considerable manufacturing and design refinements, both films are less expensive to produce than the GAF films they replace.

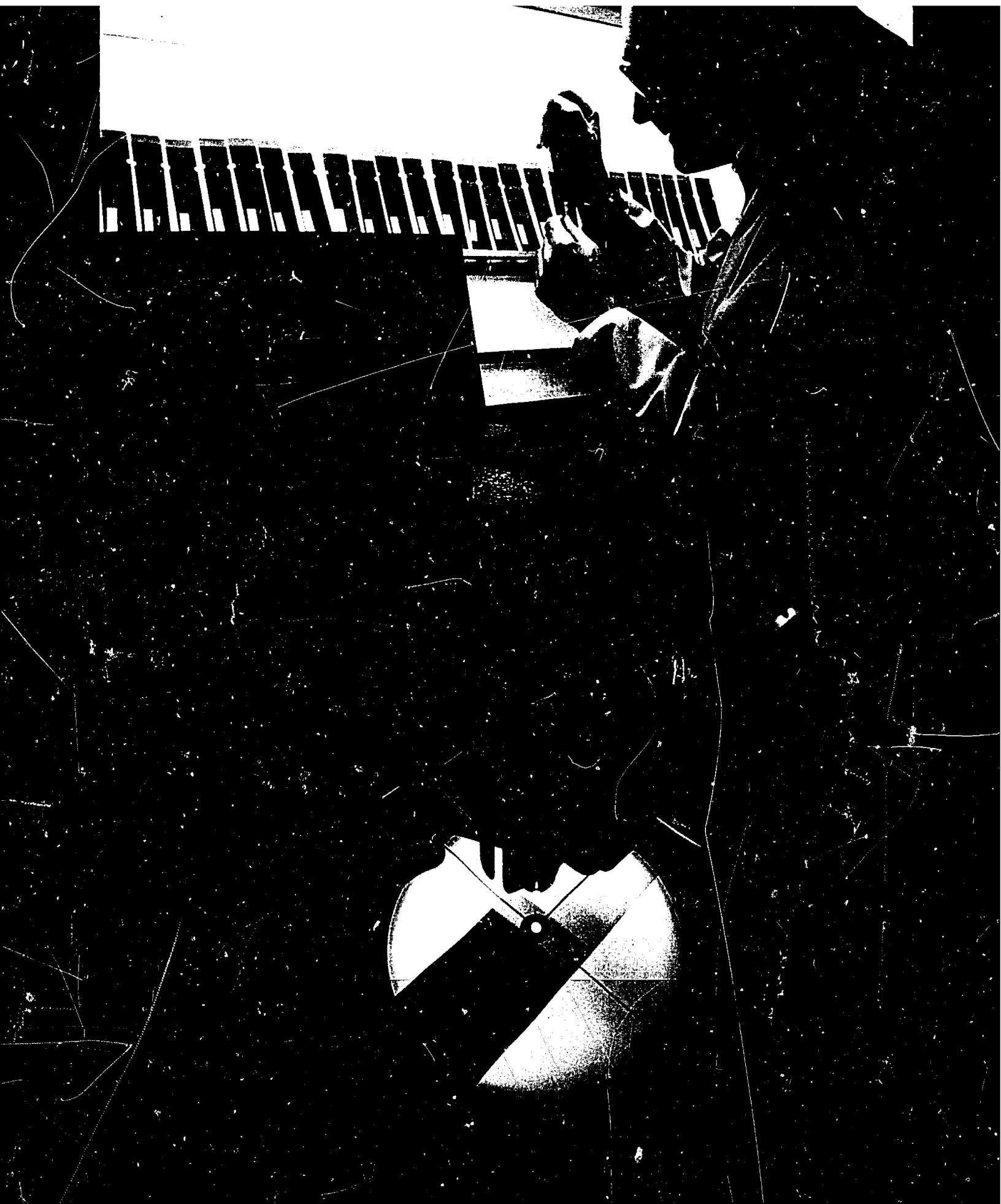
The Gafmed® x-ray products line increased in sales in 1978 and showed significantly higher profits than had been reached before. During the year, hardware manufacturing was moved from Brooklyn, N.Y., and consolidated in Binghamton, N.Y.

### New x-ray customers

On the marketing side, new accounts were secured, including some of the country's larger medical centers and hospitals. Several new customers, including major hospitals and clinics, have been gained internationally as well. In the summer, GAF launched a major medical x-ray advertising campaign, which has been effective in the radiological marketplace.

Quality improvements and new product offerings in GAF's Gafmate® and Gaftype™ graphic arts products led to significantly higher sales volumes and improved profits. These films papers and chemicals serve the printing industry: Gaftype products are used in phototypesetting; Gafmate products are used in preparatory stages of various printing processes. Both lines are gaining increased acceptance by newspapers, commercial printers and other publishers. Domestic demand has been strong, as have sales in Europe. Gaftype™ S phototypesetting paper was introduced in September and has already made a place for itself in the market.

Diazo equipment, used by engineers and architects to reproduce plans, also did well in 1978, with sales up substantially in both the U.S. and international markets. In particular, the Print Vac® 190 diazoprinter, a small unit designed for satellite diazo operations in decentralized offices, has



proved popular since its introduction in late 1977. In addition to its compact size, this machine removes most of the ammonia odor from prints.

### **Broad diazo line**

The company makes a full line of 17 mercury vapor and fluorescent diazo machines, from the low-printing-volume Print Vac® 190 to the top-of-the-line 1200DA which makes high quantities of prints quickly and economically. A new machine to meet the needs of the oil exploration business, the Gaflog™ diazoprinter, was introduced in the second half of 1978 and has sold well. This unit reproduces oil drilling seismic logs, and is small enough to be housed in an on-site trailer.

Worldwide diazo equipment and sensitized papers sales increased 15% over 1977 levels, with profits rising as well. Diazo microfilm—a product line designed to reproduce microfilms economically—has experienced significant gains, with several sales to new customers during 1978, as well as continuing demand from established accounts. A new product, Gafline™ 12 diazo microfilm, was brought out in 1978 and has sold well. This film is designed to duplicate computer output. New chemistries have been developed which show excellent resistance to yellowing.

### **Improved efficiency**

Substantial savings were realized in Photo & Repro manufacturing during the year through a broad program to improve production efficiency.

Sales of View-Master® stereo viewers and reels and Pana-Vue® slides were up slightly from 1977 levels in the United States, but rose substantially in Europe. A program of price increases and improved manufacturing efficiencies has been initiated in order to

offset rising costs. During 1978, the View-Master line doubled its annual offering of new reel packets, including such features as Superman... The Movie, The Wiz and King Tut. Also, added emphasis is being placed on marketing in drug chains and catalog showrooms.

In early 1979, GAF is introducing a new product, the Double-Vue™ automatic movie viewer, a battery-operated toy that enables children to see brief double features in a hand-held viewer. A series of interchangeable movie cassettes will be available, creating an aftermarket. Considerable development effort is going into this product, and initial trade reception has been favorable.

The company's facility in Sint-Niklaas, Belgium, which had unutilized space when it opened in 1977, is now operating with increasing efficiency. This is discussed more fully in the International section of this report.

### **Business forms sale**

Although profitable, GAF's business forms line did not integrate well with the company's continuing businesses. Furthermore, changes in the nature of the marketplace would have required GAF to invest substantially in this area to continue to compete effectively. Therefore GAF chose to sell this operation.

Arrangements are in progress to sell this business, located in Shelby, Ohio. Accordingly, above sales and earnings figures exclude business forms revenues from 1978 results, and, for comparison, from prior years as well.

### **Industrial Photo Products**

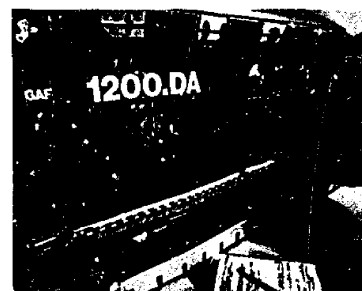
Graphic Arts Films, Chemicals,  
Phototypesetting Papers  
Industrial X-ray Films & Chemicals  
Medical & Dental X-ray Films;  
Processing Chemicals;  
Intensifying Screens & Cassettes  
Special Photo Products

### **Pictorial Products**

Pictorial Slides  
Slide Viewers  
Stereo Picture Reels  
Stereo Viewers  
Toy Movie Viewer & Cartridges

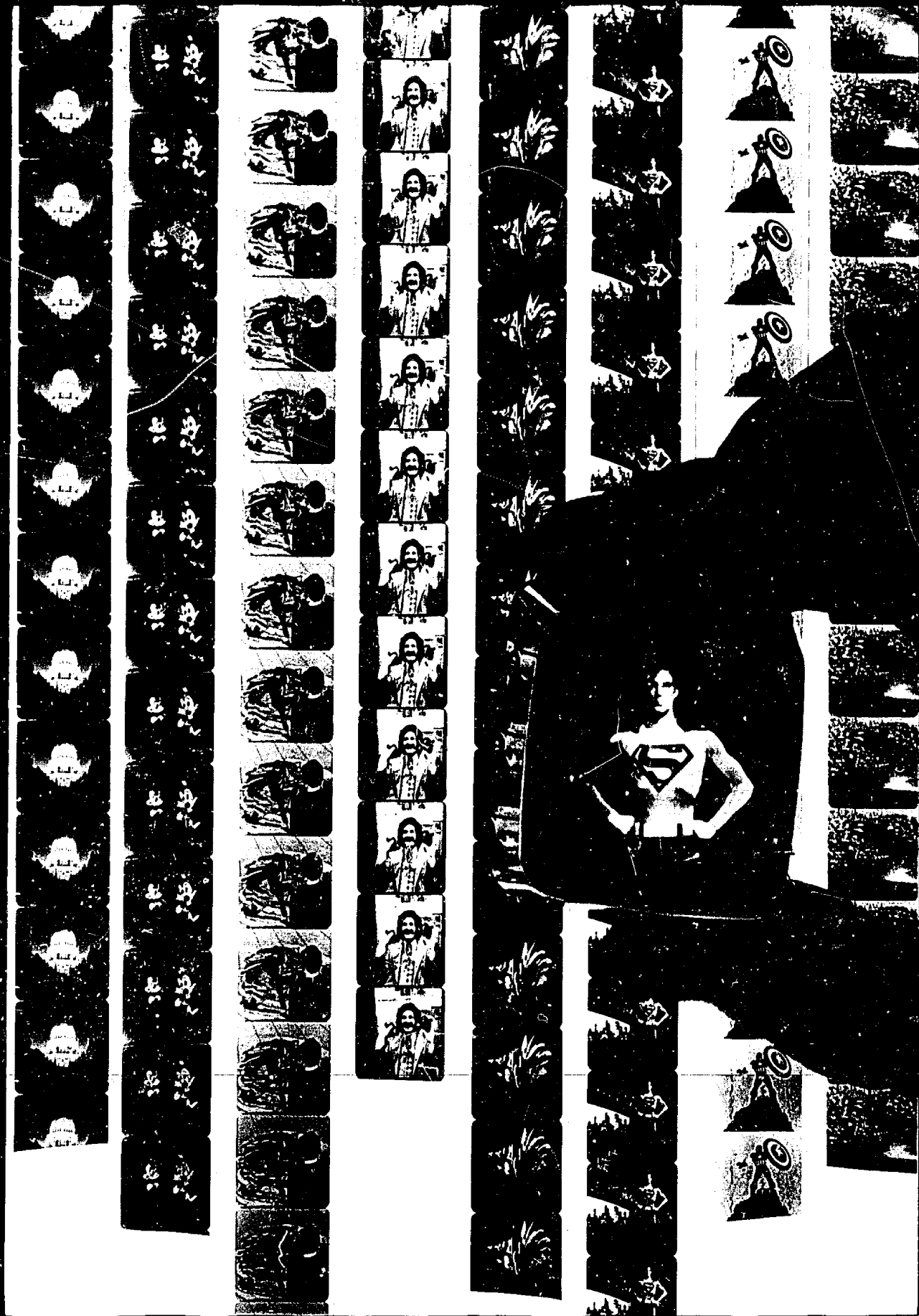
### **Reprographic Products**

Contract Manufacturing  
Diazo Engineering Printers  
& Materials  
Diazo Microfilm Equipment  
& Materials  
Overhead Transparencies

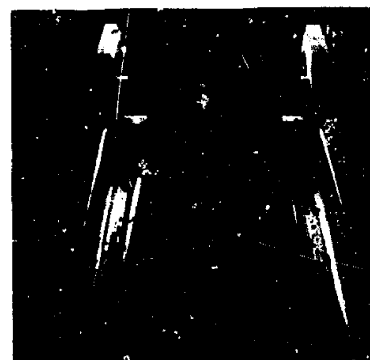
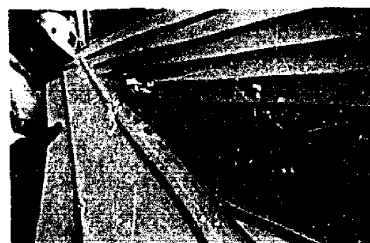


**Above: Tests are conducted on diazoprinter at each step in assembly process. The quality of these machines reinforces the company's leadership position in reprographics.**

**Opposite: Transparencies for View-Master® stereo reels are examined on light table for color, clarity, consistency. GAF's commitment to quality affects all product lines, from seemingly simple toys to complex organic chemicals.**



# Building Materials



**Top:** To earn Underwriters rating for shingles, wood is set on fire on sample roof. Results are inspected for damage.

**Middle:** Vanguard® vinyl siding is inspected for grain, warp, interlock.

**Above:** In wear test, shingles are rubbed with steel brushes to make sure mineral granules are bonded securely to surface.

**Opposite:** Roofing shingles are lab tested for resistance to sun, heat, to see how shingles stand up in tropics. Lamps will heat surface to 200°F. Thermometer tells tester when temperature is reached. Testing continues for weeks.

<b>Results</b> (Dollars in Millions)	<b>1978</b>	<b>1977</b>
Net Sales	<b>\$533.7</b>	\$474.2
Direct Operating Profit*	<b>\$ 39.5</b>	\$ 41.0

\* Excludes General Corporate Expenses

Building Materials sales, worldwide, rose to \$533.7 million in 1978, an increase of almost 13% from 1977 sales of \$474.2 million. Operating profits were \$39.5 million, compared with \$41.0 million in 1977.

GAF is the largest manufacturer of asphalt roofing in the United States. The company's roofing products business benefits from high housing starts—more than two million starts were reported in 1978. But it also benefits from remodeling and renovation projects, which generally rise when housing starts decline. GAF estimates that roughly 70% of its roofing goes into renovations with the remainder to new construction. Industry analysts predict that Americans will spend almost \$38 billion on home repairs and renovations in 1979.

## Roofing strong

Led by excellent sales of Timberline® shingles, an attractive premium quality product line, roofing sales and profits in 1978 rose almost 20% above the strong performance achieved in 1977. Higher sales volumes and price increases completely offset increased manufacturing costs, which were largely attributable to increased costs of asphalt, a petroleum product.

GAF is increasing its capacity to manufacture glass-mat-based roofing. These shingles and roll roofing use substantially less asphalt than more traditional organic-felt-based products, and

are showing strong growth, particularly in warm climates where the increased dimensional stability of glass-based shingles is particularly desirable.

The company announced in late 1978 it would build its own plant to manufacture fiberglass mat in Chester, S.C. Ground was broken for this new facility in early 1979 and construction has begun. GAF already manufactures glass-mat shingles using purchased mat at its Mobile, Ala., and Tampa, Fla., facilities, and is building a new plant in Fontana, Calif., which will make glass-based roofing for the West Coast market. This will be the company's first roofing plant west of the Rockies. Further plans call for glass-mat roofing to be made at other GAF plants as well.

## Built-up roofing rising

Built-up roofing for the commercial/industrial market also did well in 1978. From the doldrums in the mid-70s, this type of construction began gaining in 1977, with the trend continuing through 1978. GAF's systems approach to marketing its product line, through which the company offers virtually everything required for the completed built-up roof, has benefited the sales effort.

GAF is the second-largest manufacturer of floor tile in the United States, and is among the leaders in sheet vinyl flooring. Floor tile sales rose almost 10% in 1978 as a result of product line expansions and price increases. GAF's Brite-Bond™ floor tile showed particular sales strength, due to a large selection of colors, patterns and its "no-wax" urethane-surface wear layer.

Worldwide sheet vinyl flooring sales were up slightly for the year,



with profits off due to the absorption of the costs of bringing the new plant in Mullingar, Ireland, into production. This factory manufactures vinyl flooring in metric widths for European consumption. The plant became operational in the latter part of the year.

### **U.S. sheet vinyl up**

In the United States, sheet vinyl profits were sharply higher than in 1977. A new product line, Gafstar® 6700 series sheet vinyl flooring with "super vinyl surface" (SVS), was introduced during the summer, and was well received. SVS™ is a new wear layer which gives maximum durability with a minimum of maintenance.

On the production side, GAF is investing approximately \$2.5 million in a new, highly efficient materials handling system for the Whitehall, Pa., sheet vinyl manufacturing plant.

Siding sales and earnings were off for the year as a result of GAF's announcement that it would no longer offer Stratalite® siding, which contains mineral fiber. The company's mineral fiber/cement products, used primarily as filler for cooling towers, are being discontinued as well. Sales of Vanguard® vinyl siding were approximately the same as those achieved in 1977. In early 1979 GAF began manufacturing vinyl trim and accessories used with this product line. Recent industry pricing shifts have made Vanguard vinyl siding much more competitive with aluminum siding, enhancing the 1979 sales outlook.

The building materials industry has grown increasingly technology oriented, and GAF's Gaftemp® polyurethane insulation is a case in point. Designed for use on roof decks and similar applications, one of the products in the line features a composite unit of polyurethane and perlite chemi-

cally bonded to prevent delamination. This combination of materials gives the roof insulation the excellent insulating properties of polyurethane and the fire resistance of perlite. Manufactured in 3' x 4' sheets, Gaftemp polyurethane insulation is easily installed as well. Other products in the Gaftemp insulation line include ail-urethane insulation sheets and all-perlite sheets. GAF introduced a new line of fasteners in 1978 to facilitate installation of these sheets.

### **Insulation plant**

The company's new manufacturing operation for Gaftemp insulation at the St. Louis facility went into start-up production in the fourth quarter of 1978.

Sales of automotive products—sound-deadening paddings and advanced mastics—were approximately even with 1977 levels. Older lines are being phased out to make way for more advanced products from the company's new manufacturing operations in Joliet, Ill., and start-up delays at that facility impaired sales and seriously affected earnings. Sales rose in the second half of the year as GAF products were incorporated in 1979 model cars.

### **Floor Products**

Adhesive backed Floor Tile  
Adhesives & Fillers  
Flooring Felt  
Installation Tools  
Resilient Floor Tile  
Seam Fusing System  
Sheet Vinyl Floors  
Underlayment  
Vinyl Cove Base

### **Insulation Products**

Building Insulation  
Fastener System  
Roof Insulation

### **Roofing Products**

Asphalt Shingles  
Built-up Roofing Materials  
Coatings & Plastic Cements  
Roll Roofing

### **Siding Products**

Decorative Shutters  
Vinyl Siding  
Vinyl Soffit & Fascia Systems

### **Automotive Products**

Automotive Sound-deadening  
& Insulation Products



**Top: Tensile strength of sheet vinyl flooring sample is measured to ensure that GAF floor will stand up to years of household wear and tear.**

**Above: Floor tile is checked against standard sample for color, pattern uniformity.**

**Opposite: Quality of products cannot be maintained by sophisticated instrumentation alone. With old-world skill, engraver inspects rotogravure printing cylinder which will be used in making flooring.**





# International

International sales of GAF products to customers worldwide were \$216.7 million in 1978, an increase of 23% from \$176.3 million in 1977 (these figures are included in the results of the three worldwide sales groupings). These sales include goods produced in the United States and exported, as well as products manufactured in other countries. Some of the sales increase resulted from translating foreign sales into U.S. dollars.

## Foreign exchange results

GAF was exposed to substantial foreign exchange losses arising from the weakness of the U.S. dollar in 1978, but was able to offset most of these through its program of investing in foreign currencies. The company's after tax foreign exchange loss in 1978 was approximately \$600,000, compared with gains of approximately \$100,000 in 1977.

While exports of GAF products made in the U.S. A. exceeded 1977 levels, the upward trend in exports to Europe experienced in recent years may begin to diminish as GAF's new European manufacturing facilities fill an increasing part of overseas demand.

The new acetylene-based chemicals facility in Marl, West Germany, a joint venture with Chemische Werke Hüls, went through an orderly start-up phase and is producing butanediol of excellent quality. The plant is now operational, and sales of its products are rising. In early 1979, the joint-venture company announced that it would add to the Marl plant, building a THF (tetrahydrofuran) production facility there. GAF

exported THF from the United States in 1978. With demand increasing steadily in the U.S., European production is needed to fill local needs.

The new facility in Sint-Niklaas, Belgium, is now fully occupied. The plant's primary functions are manufacturing View-Master® viewers and reels, Pana-Vue® slides and viewers and other hardware, converting and packaging x-ray and graphic arts films, formulating photographic chemicals for x-ray and graphic arts processing, and other manufacturing operations. In early 1979, Sint-Niklaas also became a central distribution and warehousing point for GAF building materials in Europe. Specifically, some of the sheet vinyl flooring manufactured at the new plant in Mullingar, Ireland, is being distributed on the Continent through Sint-Niklaas.

## New plant—new business

When GAF entered the start-up phase of the Mullingar plant, more was involved than getting a factory up and running. Not only were there a significant number of technological changes, but the company was, in fact, entering a new business—metric width sheet vinyl flooring. This required a number of things to be done on the marketing side, such as creating new sample books and in-store display racks, new brochures and other promotional materials in several languages, and hiring and training sales personnel. Also, considerable design effort went into creating products for the new market, where style and color preferences are different from those in the United States. Significant expenses were incurred in accomplishing these

goals, as well as the costs of bringing the new factory on stream. The plant is now producing high-quality products, however, and customer orders are rising.

## Sales increases

Significant sales increases were achieved in 1978 in several product areas:

International sales of View-Master® viewers and reels and Pana-Vue® pictorial products were up more than 15% for the year, with particular strength in the United Kingdom. X-ray and graphic arts products sales increased more than 30% with significant sales gains in Belgium and West Germany. Sales of reprographic equipment and supplies rose more than 20%.

Significant gains were made in international sales of diazo equipment in Australia, New Zealand and in the United Kingdom. The company manufactures diazo products in the United States and in the Netherlands, Great Britain, Australia and Greece.

Chemical sales internationally were up more than 30%.

Building materials sales were off approximately 10% for the year, largely as a result of the Mullingar start-up. In the closing months of 1978, however, building materials sales were almost 30% higher than 1977 monthly levels.

# Corporate

## Research and Development

The company's research and development efforts in 1978 were divided between developing new products and improving manufacturing processes. A number of noteworthy successes were achieved in both areas.

- In flooring, GAF introduced a high performance, vinyl wear layer with significantly increased durability and stain resistance. This has been incorporated in the company's new Gafstar® 6700 series sheet vinyl.

Also in the flooring area, GAF introduced a vinyl floor tile containing no mineral fiber. This product, which is competitive with conventional tile, helps the company compete in areas where mineral fiber usage is restricted.

- The company's roofing lines were expanded with glass-based cap sheet and plying membranes for hot-mopped built-up roofing systems. Work continued on polyurethane roof insulation, some of which is now being marketed.

A process to manufacture a premium asphalt roofing shingle with unique styling was developed in 1978 as well.

- Supporting Chemical operations, a new, computer-based production control system was devised and is in use at the Texas City plant, assuring higher yields of superior quality butanediol. The research and development department also helped expand THF manufacturing capacity at the Linden, N.J. plant. Process improvements were also made in surfactant manufacturing.

- Low warp and fire retardant grades of Gafite® PBT were created and introduced in 1978 and early 1979. Certain Gafite PBT resins were demonstrated to comply with FDA requirements for food packaging.

- New specialty chemicals were developed, with possible applications in agricultural chemicals, heavy-duty liquid detergents, detergent bars and lubricants.

- A new family of latices for use as non-woven binders and pressure-sensitive adhesives is being introduced.

- A new x-ray film for wide latitude medical radiography, Gafmed® SR/1 was introduced and has gained market acceptance. The film has superior radiographic qualities, yet is less expensive to manufacture than the product it replaces. New films for the dental and podiatric x-ray markets were also introduced in 1978. Improve-

ments were made in GAF's Gafmed® x-ray processing chemicals, as well.

- In the reprographics area, GAF has developed new polymer and diazo chemistries, which form the basis of a new line of polyester intermediates with exceptional resistance to yellowing. Also, a new, imaging dielectric film is under development.

- Gafline™ 12 diazo microfilm, a new product designed specifically for duplicating computer output microfilm, was introduced in 1978. The film offers intense black image color, high density and contrast, high speed and wide development temperature latitude.

increased gradually during the year while silver prices climbed sharply in late 1978 and early 1979. GAF is endeavoring to control these expenses by monitoring requirements and by careful planning of purchases.

### **Marketing Services**

Consumer advertising in 1978 involved a coordinated print and television campaign, while industrial products advertising was concentrated in business and trade publications.

GAF's advertising and collateral materials won several design and readership awards during the year. WNCN's Keynote Magazine was cited by the American Institute of Graphic Arts, The New York Art Directors' Club and Art Direction Magazine. Four readership awards were earned by print advertisements for GAF's chemicals and reprographic equipment. In addition, the GAF logo was featured in the book, "International Trademark Design," and the company's tank truck fleet identity program was honored by the Private Carrier Conference of the American Trucking Association.

In December, GAF announced that it had selected a new advertising agency, Scali, McCabe and Sloves, for the company's consumer advertising.

### **WNCN**

GAF's FM classical music broadcasting station, WNCN, continued to draw favorable attention to the company with articles in major publications and recognition by the Arts and Business Council which granted WNCN its "Encore" award.

Advertising revenues increased on a substantial upward trend. A major advertising rate increase was instituted during the year without any negative effect on advertising volume. As the station wins greater recognition as a means of access to the New York metropolitan area's upper income population, further revenue gains are anticipated.

Several advertisers, including retailers, international airlines, automobile companies and cosmetics manufacturers are adding WNCN to the media they use as a way of targeting their messages to an audience with a high level of influence and disposable income. These companies had typically been advertising in more general media, and now perceive a way through WNCN to reach a select audience in the nation's largest market.

### **Personnel**

At year-end 1978, GAF employed 16,179 people, of whom 12,982 work in the United States. More than 7,000 of these employees are represented by 66 union locals, with which stable relations were maintained, with no time lost due to GAF labor disputes. Twenty-four labor contracts were

negotiated, all but six for multi-year periods. Terms reached compared favorably with settlements reached by other companies. Four NLRB elections were held, with a union gaining representation in one case, union representation voted down in the other three.

Total employment of minority group members at GAF increased slightly during 1978, to 16% of the company's workforce. Women in sales and professional positions rose more than 6%. In addition, more than 600 Vietnam veterans were hired.

The GAF Salaried Employees' Retirement Plan was improved in 1978, including making it non-contributory. Approximately 3,000 employees received refund checks representing prior contributions, totaling more than \$6 million. Also, in an effort to reduce hiring costs and enhance recruiting efforts, a program was begun to reward employees who refer successful candidates for salaried jobs at GAF.

During 1978, management development and training sessions were attended by more than 1,200 employees, an increase of almost 15% over 1977.

In 1978, 3,098 employees, representing 41,825 years of collective service, received awards for from 5 to 45 years with the company.

Significant improvements in net sales per employee ratios resulted from the company's asset redeployment program. In 1976, the last full year prior to the initiation of the program, net sales per employee stood at \$51,734; in 1978 there were \$65,720 in sales for each GAF employee.

### **Government Sales**

Direct sales of GAF products to the U.S. Government are negotiated by the company's Washington, D.C., government relations office. All the company's product lines, whether photographic, chemical or building materials, are handled by this office.

GAF currently has contracts and purchase orders with the General Services Administration, the Veterans Administration, the Department of Defense and the Department of Housing and Urban Development. The company also has research and development agreements with various government agencies, including the Department of Energy and the Department of Defense.

### **Board of Directors**

Mr. William Sword resigned from the Board of Directors in March of 1978. With his resignation, the Board was reduced from 11 to 10 members, of whom six are outside directors and four are executives employed by GAF.

Dr. Howard S. Turner, a member of the Board of Directors for 10 years, has informed us that he will not stand for reelection this April. Dr. Turner recently retired as chief executive officer of Turner Construction Company, and is reducing other business commitments as well to have more time to devote to personal interests. His unselfish service to GAF over the past decade and his knowledgeable counsel are appreciated greatly and will be missed.

Mr. T. Roland Berner, Chairman of the Board of Curtiss-Wright Corporation, has been nominated to replace Dr. Turner. Mr. Berner

served on the GAF Board of Directors from 1965 through 1975, when he resigned to avoid a possible conflict of interest. That conflict having been resolved, the Board welcomes Mr. Berner's return.

### **Audit Committee**

The Board of Directors Audit Committee, consisting of outside directors, meets separately with the independent certified public accountants and company management at least twice a year to discuss the scope and results of the annual examination, internal accounting controls and significant accounting matters.

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**GAF CORPORATION**  
**Board of Directors**

**Jesse Werner\***  
Chairman

**Peter Bosshard\*\***  
Executive Vice President  
Credit Suisse

**Carter L. Burgess\*\***  
Chairman  
Foreign Policy Association

**Philip B. Dalton**  
President  
GAF Corporation

**Sam Harris\*\*\***  
Partner  
Fried, Frank, Harris,  
Shriver & Jacobson

**Juliette M. Moran**  
Executive Vice President  
GAF Corporation

**William S. Ogden\***  
Executive Vice President  
Chase Manhattan Bank, N.A.

**James J. O'Leary\*\*\***  
Vice Chairman of the Board  
United States Trust Company  
of New York

**James T. Sherwin**  
Executive Vice President  
GAF Corporation

**Howard S. Turner\***  
Chairman of the Board  
Turner Construction Company

\*Member, Executive Committee

\*\*Member, Audit Committee

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**GAF CORPORATION**  
**Officers**

**Jesse Werner**  
Chairman and  
Chief Executive Officer

**Philip B. Dalton**  
President and  
Chief Operating Officer

**Juliette M. Moran**  
Executive Vice President

**Jay R. Olson**  
Executive Vice President

**James T. Sherwin**  
Executive Vice President

**Richard F. Smith**  
Executive Vice President

**James M. Cloney**  
Senior Vice President

**R. Power Fraser, Jr.**  
Senior Vice President

**Jack F. Gow**  
Senior Vice President

**Joseph G. Hall**  
Senior Vice President

**Jack Scheckowitz**  
Senior Vice President

**Louis C. Zachary**  
Senior Vice President

**Randolph C. Bramwell**  
Vice President

**John A. Brennan**  
Vice President

**John J. Butler**  
Vice President

**Mason B. Cooke**  
Vice President

**Thomas A. Dent**  
Vice President

**Leo J. Faneuf**  
Vice President

**Jerome K. Full**  
Vice President

**Simon W. Kantor**  
Vice President

**Frederick W. McNabb, Jr.**  
Vice President  
General Counsel and Secretary

**Wayne H. Page**  
Vice President

**Alfred P. Rimlinger**  
Vice President

**Raymond W. Smith**  
Vice President

**A. Eugene Stillman**  
Vice President and  
Controller

**Philip S. Gillcrist**  
Treasurer

## Review of Consolidated Financial Information

### Schedule of Business Segments and Summary of Operations\*

		Dollars in Millions				
Year Ended December 31	1978	1977	1976	1975	1974	1973
Sales						
Chemical	\$ 281.0	\$226.4	\$213.0	\$198.1	\$187.1	\$150.8
Less Intergroup Sales**	32.2	25.5	22.1	20.9	20.0	13.2
Net Chemical	248.8	200.9	190.9	177.2	167.1	137.6
Photo & Repro	280.8	244.4	218.2	202.1	196.5	164.7
Building Materials	533.7	474.2	421.7	372.3	360.6	303.4
Consolidated Sales	1,063.3	919.5	830.8	751.6	724.2	605.7
Cost of Products Sold	765.9	665.3	592.2	517.9	498.7	410.0
Direct Operating Expenses	195.6	164.3	152.0	136.7	131.4	113.9
Direct Operating Profit***						
Chemical	50.6	45.5	41.0	42.3	45.6	32.0
Photo & Repro	11.7	3.4	1.4	6.7	5.9	11.6
Building Materials	39.5	41.0	44.2	48.0	42.6	38.2
Total	101.8	89.9	86.6	97.0	94.1	81.8
Corporate Expenses						
Interest	18.7	20.4	17.1	17.6	17.8	13.1
Other***	27.4	21.3	21.3	17.2	21.8	8.7
Income from Continuing Operations Before Income Taxes	55.7	48.2	48.2	62.2	54.5	60.0
Income Taxes	25.3	22.0	20.0	23.9	23.8	26.8
Income from Continuing Operations	30.4	26.2	28.2	38.3	30.7	33.2
Income (Loss) from Discontinued Segments Net of Income Taxes	3.8	(73.2)	(8.5)	(7.4)	(2.2)	(1.4)
Net Income (Loss)	\$ 34.2	\$ (47.0)	\$ 19.7	\$ 30.9	\$ 28.5	\$ 31.8
Identifiable Assets						
Chemical	\$ 163.4	\$143.2	\$192.5	\$181.1	\$175.2	\$179.4
Photo & Repro	241.6	243.6	326.9	297.7	319.7	262.7
Building Materials	296.3	242.6	205.6	187.8	181.4	157.5
Corporate	61.6	61.3	52.4	66.2	45.9	40.4
Assets of Discontinued Segments	22.4	71.7	—	—	—	—
Total Assets	\$ 785.3	\$762.4	\$777.4	\$732.8	\$722.2	\$640.0
Additions to Property, Plant and Equipment						
Chemical	\$ 8.5	\$ 12.9	\$ 12.7	\$ 11.1	\$ 9.0	\$ 3.8
Photo & Repro	9.0	11.0	16.8	15.0	10.7	8.0
Building Materials	32.4	27.8	17.7	11.8	16.1	12.1
Corporate	1.2	.6	1.4	.1	3.5	2.0
Total	\$ 51.1	\$ 52.3	\$ 48.6	\$ 38.0	\$ 39.3	\$ 25.9
Depreciation						
Chemical	\$ 8.4	\$ 8.0	\$ 7.8	\$ 5.7	\$ 5.4	\$ 5.4
Photo & Repro	7.6	7.9	6.4	6.6	6.7	7.0
Building Materials	9.6	8.4	8.5	8.5	8.1	7.4
Corporate	1.4	1.3	1.3	1.1	1.1	.8
Total	\$ 27.0	\$ 25.6	\$ 24.0	\$ 21.9	\$ 21.3	\$ 20.6

\* Statement of Income information is presented so as to segregate continuing from discontinued operations for all periods. Balance sheet amounts pertaining to years before 1977 have not been restated to separately identify amounts applicable to discontinued segments. See Note 1 of Notes to Consolidated Financial Statements.

\*\* Intergroup sales are recorded at the same prices charged to unaffiliated customers. Intergroup sales for the Photo & Repro and Building Materials groups were negligible.

\*\*\* Foreign exchange, previously included in direct operating profits, has been reclassified to Corporate Expenses—Other, for all periods.

## Management's Discussion and Analysis of Summary of Operations

The Summary of Operations is presented so as to segregate continuing from discontinued operations for all periods. The results of the discontinued businesses are shown separately (See Note 1 on page 30).

### 1978 Compared with 1977—Continuing Businesses

Consolidated sales increased \$143.8 million (16%) on gains in each of the worldwide product sales groups. Chemical sales increased \$47.9 million (24%) primarily on increased volume in acetylene, specialty and agricultural chemicals. The increase in Photo & Repro sales was \$36.4 million (15%) as a result of volume increases in the industrial photo and the reprographic product lines and, to a lesser extent, because of price increases and translation of foreign sales into United States dollars. For Building Materials, improved sales of the roofing product line, due mostly to price but also to volume increases, more than offset a decline in mineral fiber products to provide a \$59.5 million (13%) gain. Mineral fiber activities are being terminated.

Direct operating profit improved \$11.9 million (13%) with gains in Chemical and Photo & Repro slightly offset by Building Materials. Chemical profits were \$5.1 million (11%) ahead of 1977; the 1977 profit included a gain of \$3.7 million on a contract termination. Higher profits were reported in most chemical product lines but especially in the agricultural, specialty and acetylene areas. The improvement reflects increased unit volume which was partially offset by cost increases which, because of competitive pressures, were not fully passed through to selling prices. The direct operating profit of Photo & Repro increased \$8.3 million (244%) on increased volume and improved manufacturing efficiencies. Building Materials results were down \$1.5 million (4%) due to start-up expenses of new operations: a sheet vinyl plant in Ireland, an automotive padding and advanced mastic facility and a polyurethane insulation plant. Phase-out expenses incurred in terminating mineral fiber activities also curtailed Building Materials profits.

Interest expense decreased \$1.7 million (6%) primarily as a result of reduced short-term debt.

Other general corporate expenses increased \$6.1 million (29%). The increase reflects inflationary pressures, the non-recurrence of \$2.2 million of 1977 income from settlement of a lawsuit concerning a chlorine caustic plant formerly owned by the company, the absence of any executive incentive compensation in 1977 and pre-tax gains during 1977 on the sale of several properties and an investment—offset by increased pre-tax foreign exchange gains (See Note 3 on Page 32).

Increased income taxes are proportionate to the change in pre-tax earnings.

### 1977 Compared with 1976—Continuing Businesses

Consolidated sales increased \$88.7 million (11%) with higher sales in all worldwide product sales groups, caused mostly by volume and, to a lesser extent, higher selling prices. Chemical sales growth of \$10.0 million (5%) reflected improvement in most major product lines, offset by a sharp decline in the sales of agricultural chemicals. The major contributors to the growth

in Photo & Repro of \$26.2 million (12%) were reprographic and industrial photo products. Increased sales in roofing products was the primary cause for the \$52.5 million (12%) gain in Building Materials.

Direct operating profit improved \$3.3 million (4%) with gains in Chemical and Photo & Repro, but with lower earnings in Building Materials. Chemical profits (including a \$3.7 million contract termination payment) were \$4.5 million (11%) ahead of 1976. Higher earnings in most of GAF's chemical products were moderated by the decline in the agricultural chemical area, and by higher manufacturing costs which were partly caused by weather-related production problems in the first quarter. The direct operating profit of Photo & Repro increased \$2.0 million (143%) largely due to higher volume of reprographic products offset by decreases in View-Master® products. Building Materials profits were off \$3.2 million (7%) as a result of the severe winter and higher manufacturing and raw material costs for roofing and flooring products. Also, start-up expenses at the Irish sheet vinyl plant hampered profits.

Interest increased \$3.3 million (19%) due to a higher level of debt and higher interest rates.

Other general corporate expenses were constant. Increased legal fees related to the Eastman Kodak lawsuit and normal cost increases were offset by a favorable settlement of a lawsuit (\$2.2 million) and by a favorable swing in pre-tax foreign exchange results.

The annual effective income tax rate of 45.8% was higher than the 1976 rate principally due to an increase in the foreign tax component.

### Prior Years

In 1975, \$4.0 million non-taxable gain was realized on the sale of technology to the chemical joint venture in Germany.

In 1974, a pre-tax profit of \$5.5 million was realized on the repurchase of 5% convertible subordinated notes. Sale of three properties resulted in pre-tax gains amounting to \$1.4 million. A \$5.0 million provision for relocation costs was recorded in connection with the transfer of certain administrative activities to Wayne, N. J. All of these were classified as other general corporate expenses.

In 1973, a \$6.4 million pre-tax profit was realized on repurchase of 5% convertible subordinated notes which partly offset other general corporate expenses.



## Data per Common Share

Year Ended December 31	Dollars					
	1978	1977	1976	1975	1974	1973
Primary Earnings:						
Continuing	\$ 2.01	\$ 1.70	\$ 1.85	\$ 2.62	\$ 1.99	\$ 2.16
Discontinued	.28	(5.52)	(.64)	(.56)	(.15)	(.10)
Net Income (Loss)	\$ 2.29	\$(3.82)	\$ 1.21	\$ 2.06	\$ 1.84	\$ 2.06
Fully Diluted Earnings:						
Continuing	\$ 1.76	\$ 1.52	\$ 1.63	\$ 2.21	\$ 1.74	\$ 1.81
Discontinued	.21	(4.20)	(.49)	(.42)	(.12)	(.07)
Net Income (Loss)	\$ 1.97	\$(2.68)	\$ 1.14	\$ 1.79	\$ 1.62	\$ 1.74
Weighted Average Number of Shares of Common Stock Outstanding (in thousands)	13,306	13,252	13,303	13,237	13,518	13,631
Dividends on Common Shares	\$ .64	\$ .60	\$ .58	\$ .52	\$ .46	\$ .42
Shareholders' Equity	\$20.33	\$18.64	\$23.01	\$22.35	\$20.87	\$18.83

## Financial Condition\*

December 31	Dollars in Millions					
	1978	1977	1976	1975	1974	1973
Current Assets	\$472.2	\$464.1	\$451.3	\$426.6	\$435.2	\$364.0
Current Liabilities	179.8	186.3	145.5	158.8	130.9	112.6
Working Capital	292.4	277.8	305.8	267.8	304.3	251.4
Property, Plant and Equipment—Net	280.6	262.9	275.1	255.9	244.4	232.8
Total Assets	785.3	762.4	777.4	732.8	722.2	640.0
Long-term Debt (Including Current Portion)	196.8	198.4	202.4	180.5	210.1	148.6
Shareholders' Equity	351.7	329.7	387.9	379.0	357.6	342.9

\*Includes amounts applicable to discontinued segments—See Note 1 of Notes to Consolidated Financial Statements.

## Quarterly Stock Data

	Dollars							
	1978 By Quarter				1977 By Quarter			
	First	Second	Third	Fourth	First	Second	Third	Fourth
Dividends per Share:								
Common	.15	.15	.17	.17	.15	.15	.15	.15
Preferred	.30	.30	.30	.30	.30	.30	.30	.30

## Price Range of Securities:

Common: (Low-High)	8-12½	11-14¼	12½-15½	9½-14½	11½-13½	10¾-12¼	9¼-11¼	9½-11½
Preferred: (Low-High)	15-17¼	16¼-17	17½-19½	14½-19½	17¼-19¼	16½-18¼	15½-17½	15¼-16½

### **Financing Activities**

Aided by funds received from the sales of discontinued businesses assets, the company generated a strong cash flow in 1978. Even with GAF's high capital expenditure program, the company's financial results produced year-end cash (including short-term investments) of \$37.0 million, vs. \$19.7 million at the end of the prior year.

In addition, \$10.8 million of cash flow was applied to reduce total debt from \$231.3 million to \$220.5 million. Total debt includes notes payable and long-term debt including the current portion. GAF had no need to undertake any major financings during the year.

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### **GAF Corporation and Consolidated Subsidiaries Summary of Significant Accounting Policies**

(The following accounting policies apply to the continuing operations of the company.)

#### **Principles of Consolidation**

The accounts of all significant subsidiaries of the company are included in the consolidated financial statements. A wholly owned captive insurance subsidiary and the 50% ownership of a chemical manufacturing company are carried on the equity method.

#### **Short-term Investments**

Short-term investments are valued at cost, which approximates market.

#### **Inventories**

Inventories are valued at the lower of cost (principally average) or market.

#### **Property, Plant and Equipment, and Related Depreciation**

Expenditures for maintenance and repairs are charged directly to expense; major replacements and betterments are capitalized and depreciated over the remaining estimated economic lives of the related assets. The cost and related accumulated depreciation of property sold, retired or fully depreciated are removed from the accounts and any resultant gain or loss is included in current income.

Depreciation is computed principally on the straight-line method based on the estimated economic lives of the assets. These lives are subject to periodic review and revision to assure that the cost of the related assets is written off over their economic lives.

#### **Deferred Income Taxes**

Deferred income taxes arise from reporting certain income and expense items in the financial statements in periods different from those in which such amounts are reported for income tax purposes.

#### **Investment Tax Credit**

The company accounts for investment tax credits arising since January 1, 1971 as a reduction of the provision for United States income tax (the flow-through method). Investment tax credits which arose prior to that date have been deferred and are being amortized over the estimated service lives of the related assets.

#### **Retirement Plans**

The company and its subsidiaries have retirement plans covering substantially all employees. The company's policy is to fund amounts equal to pension costs accrued and, for plans with prior service costs, to amortize such costs over periods not to exceed forty years.

#### **Earnings Per Share**

Primary earnings per common share are computed by dividing income, less preferred stock dividend requirements, by the weighted average number of shares of common stock outstanding during the year. The computation assumes the exercise of outstanding stock options to the extent they are dilutive.

Fully diluted earnings per common share are computed on the assumption (where the effect thereof would be dilutive) that convertible securities outstanding had been converted into shares of common stock. Appropriate adjustments for dividends on preferred stock and interest on convertible notes (net of income tax effect) are made to earnings applicable to common stock for assumed conversions. The computation also assumes the exercise of all dilutive stock options.

## Consolidated Statements of Income (Note 1)

Year Ended December 31	1978	1977
<b>Net Sales</b>	<b>\$1,063,291,000</b>	\$919,541,000
<b>Costs and Expenses</b>		
Cost of products sold	765,917,000	665,337,000
Distribution and selling	146,717,000	124,314,000
Advertising	16,698,000	15,502,000
Research and development	14,632,000	11,959,000
General and administrative	49,795,000	43,089,000
Interest (Note 7)	18,677,000	20,416,000
Total Costs and Expenses	1,012,436,000	880,617,000
	50,855,000	33,924,000
<b>Other Income</b>		
Income from contract termination (Note 4)	—	3,700,000
Other—net (Note 3)	4,885,000	5,627,000
Total Other Income	4,885,000	9,327,000
<b>Income from Continuing Operations Before Income Taxes</b>	<b>55,740,000</b>	48,251,000
<b>Income Taxes (Note 6)</b>	<b>25,341,000</b>	22,058,000
<b>Income from Continuing Operations</b>	<b>30,399,000</b>	26,193,000
<b>Discontinued Segments</b>		
Operating Income (loss), net of income taxes	750,000	(6,311,000)
Estimated Income (loss) from disposition, net of income taxes	3,015,000	(66,839,000)
<b>Income (Loss) from Discontinued Segments</b>	<b>3,765,000</b>	(73,150,000)
<b>Net Income (Loss)</b>	<b>34,164,000</b>	(46,957,000)
Less Preferred stock dividend requirements	3,636,000	3,636,000
<b>Net Income (Loss) Applicable to Common Stock</b>	<b>\$ 30,528,000</b>	\$ (50,593,000)
<b>Weighted Average Number of Common Shares Outstanding</b>	<b>13,306,000</b>	13,252,000
<b>Earnings per Common Share</b>		
Primary		
Continuing	\$ 2.01	\$ 1.70
Discontinued	.28	(5.52)
Net Income (Loss)	\$ 2.29	\$ (3.82)
Fully Diluted		
Continuing	\$ 1.76	\$ 1.52
Discontinued	.21	(4.20)
Net Income (Loss)	\$ 1.97	\$ (2.68)

## Consolidated Statements of Retained Earnings

Year Ended December 31	1978	1977
Balance, January 1	\$263,542,000	\$321,935,000
Net Income (Loss)	34,164,000	(46,957,000)
Less cash dividends:		
Preferred stock (\$1.20 per share)	3,636,000	3,636,000
Common stock (1978—\$.64 per share, 1977—\$.60 per share)	8,457,000	7,800,000
Balance, December 31	\$285,613,000	\$263,542,000

See Summary of Significant Accounting Policies and Notes to Consolidated Financial Statements.

# Consolidated Statements of Changes in Financial Position

Year Ended December 31	1978	1977
<b>Working Capital Provided</b>		
Continuing Operations:		
Income from Continuing Operations	\$ 30,399,000	\$ 26,193,000
Charges not affecting working capital:		
Depreciation	26,970,000	25,646,000
Deferred income taxes	3,147,000	4,200,000
Translation losses—noncurrent portion	3,273,000	1,611,000
Other	6,625,000	4,385,000
Working Capital provided	70,414,000	62,035,000
Discontinued Segments:		
Income (loss) from Discontinued Segments	3,765,000	(73,150,000)
Charges (credits) not affecting working capital:		
Deferred income tax benefits	(2,000,000)	(24,100,000)
Provision for employee benefits—noncurrent portion	—	20,200,000
Provision for loss on disposition of fixed assets	—	19,628,000
Write-off of intangible assets—noncurrent portion	—	11,153,000
Other	394,000	12,778,000
Working Capital provided (used)	2,159,000	(33,491,000)
Total working capital provided from operations	72,573,000	28,544,000
Increases in long-term debt	4,060,000	11,945,000
Fixed assets of discontinued segments held for sale	3,991,000	11,566,000
Increase in noncurrent liability for phase-out costs	7,631,000	—
Total	88,255,000	52,055,000
<b>Working Capital Applied</b>		
Additions to property, plant and equipment	51,148,000	52,266,000
Cash dividends	12,093,000	11,436,000
Reductions in long-term debt	8,278,000	19,011,000
Other	2,137,000	(2,647,000)
Total	73,656,000	80,066,000
<b>Increase (Decrease) in Working Capital</b>	<b>14,599,000</b>	<b>(28,011,000)</b>
Working Capital, January 1	277,806,000	305,817,000
Working Capital, December 31	\$292,405,000	\$277,806,000
<b>Analysis of Changes in Working Capital</b>		
Increase (decrease) in current assets:		
Cash and short-term investments	\$ 17,290,000	\$ 971,000
Accounts receivable	35,770,000	(15,764,000)
Inventories	16,069,000	(64,114,000)
Prepaid expenses	2,385,000	1,421,000
Income tax benefits	(14,133,000)	18,571,000
Assets of discontinued segments	(49,296,000)	71,744,000
Total	8,085,000	12,829,000
(Increase) decrease in current liabilities:		
Notes payable	9,244,000	(9,168,000)
Current portion of long-term debt	(1,543,000)	(2,470,000)
Accounts payable	(7,492,000)	(3,786,000)
Accrued liabilities	8,229,000	(27,707,000)
Income taxes payable	(1,924,000)	2,291,000
Total	6,514,000	(40,840,000)
<b>Increase (Decrease) in Working Capital</b>	<b>\$ 14,599,000</b>	<b>\$ (28,011,000)</b>

See Summary of Significant Accounting Policies and Notes to Consolidated Financial Statements.

## Consolidated Balance Sheets

December 31	1978	1977
<b>Assets</b>		
<b>Current Assets</b>		
Cash	\$ 14,384,000	\$ 19,129,000
Short-term investments	22,625,000	590,000
Accounts receivable—trade, less allowance for doubtful accounts—1978, \$5,318,000; 1977, \$4,949,000	168,142,000	142,203,000
Accounts receivable—other	18,679,000	8,848,000
Inventories		
Finished goods	105,290,000	100,851,000
Work in process	29,802,000	26,952,000
Raw materials and supplies	75,353,000	66,573,000
Total Inventories	210,445,000	194,376,000
Prepaid expenses	11,070,000	8,685,000
Income tax benefits (Note 1)	4,438,000	18,571,000
Assets of discontinued segments, at estimated realizable value (Note 1)	22,448,000	71,744,000
Total Current Assets	472,231,000	464,146,000
<b>Property, Plant and Equipment, at cost (Note 11)</b>		
Land and land improvements	17,591,000	16,287,000
Buildings and building equipment	119,238,000	113,399,000
Machinery and equipment	268,720,000	258,464,000
Construction in progress	27,731,000	25,285,000
Total Property, Plant and Equipment	433,280,000	414,435,000
Less accumulated depreciation	152,710,000	151,498,000
Property, Plant and Equipment—Net	280,570,000	262,937,000
<b>Cost in Excess of Net Assets Acquired</b>	<b>24,351,000</b>	<b>25,806,000</b>
<b>Other Assets</b>	<b>8,112,000</b>	<b>9,525,000</b>
<b>Total Assets</b>	<b>\$785,264,000</b>	<b>\$762,414,000</b>

See Summary of Significant Accounting Policies and Notes to Consolidated Financial Statements.

December 31 1978 1977

**Liabilities and Shareholders' Equity**

**Current Liabilities**

Notes payable (Note 7)	<b>\$ 23,608,000</b>	\$ 32,852,000
Current portion of long-term debt (Note 7)	<b>8,124,000</b>	6,581,000
Accounts payable	<b>79,133,000</b>	71,641,000
Accrued liabilities (Note 1)	<b>65,050,000</b>	73,279,000
Income taxes payable	<b>3,911,000</b>	1,987,000
Total Current Liabilities	<b>179,826,000</b>	186,340,000

<b>Long-term Debt Less Current Portion (Note 7)</b>	<b>188,721,000</b>	191,865,000
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**Deferred Credits**

Income taxes	<b>22,023,000</b>	20,845,000
Investment tax credit	<b>2,008,000</b>	2,581,000
Total Deferred Credits	<b>24,031,000</b>	23,426,000

<b>Other Liabilities (Note 1)</b>	<b>40,948,000</b>	31,112,000
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**Commitments and Contingent Liabilities (Note 11)**

**Shareholders' Equity (Notes 7, 8 & 9)**

Preferred stock, \$1 par value; authorized 6,000,000 shares; \$1.20 convertible series issued—1978, 3,105,767 shares; 1977, 3,105,957 shares; at assigned value of \$1.25 per share (liquidation value 1978, \$83,308,000)	<b>3,882,000</b>	3,883,000
Common stock, \$1 par value; authorized 25,000,000 shares; issued—1978, 13,770,247 shares; 1977, 13,770,010 shares	<b>13,770,000</b>	13,770,000
Additional paid-in capital	<b>53,936,000</b>	53,846,000
Retained earnings	<b>285,613,000</b>	263,542,000
Total	<b>357,201,000</b>	335,041,000
Less stock held in treasury, at cost:		
Common—1978, 567,207 shares; 1977, 550,207 shares	<b>4,531,000</b>	4,439,000
Preferred—76,400 shares in 1978 and 1977	<b>932,000</b>	932,000
Total Shareholders' Equity	<b>351,738,000</b>	329,671,000

<b>Total Liabilities and Shareholders' Equity</b>	<b>\$785,264,000</b>	\$762,414,000
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See Summary of Significant Accounting Policies and Notes to Consolidated Financial Statements.

## Notes to Consolidated Financial Statements

### 1 Discontinued Segments

In 1977, the company decided to discontinue operations in consumer photo, photo processing, dyestuffs and pigments, felts and filters and several small businesses. These businesses have been reported as discontinued segments since the end of the second quarter of 1977, except for photo processing which was reported as discontinued at the end of 1977. Effective at December 31, 1978, the company decided to discontinue its business forms operation at Shelby, Ohio. Net sales of the business forms segment were approximately \$26 million in 1978 and \$23 million in 1977. Arrangements to sell this segment are in an advanced stage.

The Consolidated Statement of Income for 1977 has been restated (and the Statement for 1978 is presented) to exclude the sales, costs and expenses of all discontinued segments from the captions applicable to the continuing operations. The Operating Income (loss) and the Estimated Income (loss) from disposition of discontinued segments have been reported separately.

Operating Income (loss) of the discontinued segments shows the results prior to the effective dates of the discontinuances. Anticipated operating losses subsequent to the effective dates of the discontinuances have been provided in the caption—Estimated Income (loss) from disposition. In 1977, operating losses (related to all segments now discontinued) were \$6.3 million (\$12.1 million before tax benefits of \$5.8 million). In 1978, operating income of the discontinued segments was \$0.8 million (\$1.6 million before taxes of \$0.8 million). The 1978 amounts pertain only to the business forms operation.

Activity in the reserve and liability accounts originally established in 1977 is summarized in the table below and is discussed in the narrative which follows.

	Reserve For Loss On Disposition of Assets	Liability For Phase-Out Costs	Total
Dollars in Millions			
Provision recorded in 1977	\$ 61.5	\$ 59.6	\$121.1
Activity during 1977	(25.6)	(7.6)	(33.2)
Balance, December 31, 1977	35.9	52.0	87.9
Activity during 1978 regard- ing 1977 discontinuances	(21.8)	(13.5)	(35.3)
Adjustment of excess reserve balance	(6.1)	—	(6.1)
Provision for discontinu- ance of business forms operation	.9	3.2	4.1
Balance December 31, 1978	\$ 8.9	\$ 41.7	\$ 50.6

in 1977, the company recorded a provision of \$121.1 million (\$66.8 million after tax benefits of \$54.3 million) for the disposal of segments discontinued during that year. The pre-tax provision was established as a reserve for loss on disposition of assets (\$61.5 million) and as a liability for anticipated phase-out costs (\$59.6 million).

Based on information available during 1978, it was determined that the reserve balance established for 1977 discontinuances exceeded expected requirements by \$3.5 million (\$6.1 million before taxes of \$2.6 million). Also during 1978, an additional provision was required in connection with the company's decision to discontinue its business forms segment, \$2.5 million (\$4.1 million before tax benefits of \$1.6 million). On the Consolidated Statement of Income for 1978, the return to Estimated Income (loss) from disposition of discontinued segments includes the net recovery, after tax, of \$1.0 million.

Previously reported tax benefits associated with the 1977 discontinuances were evaluated when information regarding 1978 taxable income became available. An additional tax benefit of \$2.0 million was recorded following this evaluation and such amount has been added to the net recovery of \$1.0 million to arrive at the total of \$3.0 million shown as Estimated Income (loss) from disposition of discontinued segments for 1978.

At December 31, 1978, the current portion of the liability for phase-out costs is \$5.6 million and is included in Accrued Liabilities; the noncurrent portion of \$36.1 million is included in Other Liabilities.

The assets of the discontinued segments have been reclassified, after the dates of their discontinuances, to remove them from their historic classifications and to separately identify them at their net realizable value. The 1977 Consolidated Balance Sheet has not been restated to reflect discontinuance of the business forms operation. The amount of assets applicable to discontinued segments for both years is presented below:

	Dollars in Millions	
December 31	1978	1977
Accounts receivable	\$ 6.1	\$ 27.4
Inventories	13.0	47.3
Property, plant and equipment—net	10.4	30.9
Other	1.8	2.0
Total Assets	31.3	107.6
Less reserve for loss on disposition of assets	8.9	35.9
Total Assets at estimated net realizable value	\$ 22.4	\$ 71.7

Sales applicable to businesses discontinued during 1977, prior to the dates at which they have been reported as discontinued, were \$121 million for 1977.

## 2 Geographic Information

Information with respect to operations by geographic area is as follows:

Dollars in Millions					
For the year	United States	Western Europe	Other	Eliminations and Other	Total Consolidated
<b>1978</b>					
Sales	\$922.3	\$162.7	\$32.4	\$(54.1)*	\$1,063.3
Less intercompany sales	44.8	91	2	(54.1)	—
Sales to Unaffiliated Customers	877.5	153.6	32.2	—	1,063.3
Direct Operating Profit	88.6	11.6	1.6	—	101.8
Corporate Office Expenses					(46.1)
Income from Continuing Operations Before Income Taxes					55.7
<b>Assets and Liabilities:</b>					
Inventories	158.0	43.1	9.3	—	210.4
Other Current Assets	185.5	45.2	8.7	22.4**	261.8
Noncurrent Assets	252.3	54.1	6.7	—	313.1
Total Assets	595.8	142.4	24.7	22.4	785.3
Current Liabilities	126.5	46.3	7.0	—	179.8
Other Liabilities	237.2	14.7	1.9	—	253.8
Total Liabilities	363.7	61.0	8.9	—	433.6
Net Assets	232.1	81.4	15.8	22.4	351.7
<b>1977</b>					
Sales	\$812.8	\$122.0	\$27.7	\$(43.0)*	\$ 919.5
Less intercompany sales	42.0	1.0	—	(43.0)	—
Sales to Unaffiliated Customers	770.8	121.0	27.7	—	919.5
Direct Operating Profit	82.8	5.4	1.7	—	89.9
Corporate Office Expenses					(41.7)
Income from Continuing Operations Before Income Taxes					48.2
<b>Assets and Liabilities:</b>					
Inventories	152.7	33.5	8.2	—	194.4
Other Current Assets	155.8	35.8	6.4	71.7**	269.7
Noncurrent Assets	246.8	45.8	5.7	—	298.3
Total Assets	555.3	115.1	20.3	71.7	762.4
Current Liabilities	134.6	46.5	5.2	—	186.3
Other Liabilities	231.7	14.3	.4	—	246.4
Total Liabilities	366.3	60.8	5.6	—	432.7
Net Assets	189.0	54.3	14.7	71.7	329.7

\*Intercompany sales are recorded at the same prices charged to unaffiliated customers.

\*\*Assets of discontinued segments at estimated realizable value (See Note 1 on page 30).



## Notes to Consolidated Financial Statements

(continued)

### 3 Foreign Exchange

Total pre-tax gains are recorded in Other income on the Consolidated Statements of Income; related taxes are included in Income Taxes. Generally, balance sheet translations are not tax effected, whereas the results of forward exchange contracts are subject to tax.

Foreign exchange gains (losses) are as follows:

	Dollars in Thousands	
For the year	1978	1977
Pre-tax		
Translation	\$ (5,506)	\$ (2,208)
Forward exchange contracts	10,013	4,373
Other	221	182
Total	\$ 4,630	\$ 2,347
After tax		
Translation	\$ (5,506)	\$ (2,208)
Forward exchange contracts	4,006	2,227
Other	(113)	70
Total	\$ (602)	\$ 1

### 4 Income from Contract Termination

Income of \$3.7 million (\$1.9 million after taxes) was realized in 1977 in connection with a customer's termination of an agricultural chemical contract.

### 5 Supplementary Financial Information

The following expenses of continuing operations are included in the Consolidated Statements of Income:

	Dollars in Thousands	
For the year	1978	1977
Maintenance and repairs	\$52,584	\$44,324
Taxes, other than taxes on income		
Social Security and unemployment	21,429	17,105
Other	7,434	6,425
Rent on operating leases	15,874	14,384

### 6 Income Taxes

Provision has not been made for the United States income taxes on unremitted earnings of foreign subsidiaries of \$32,956,000, since any withholding taxes and United States income taxes payable on dividends based on undistributed earnings would be substantially offset by foreign tax credits or because the remittance of such earnings has been indefinitely postponed. United States income taxes have not been provided on the unremitted earnings of the Domestic International Sales Corporation subsidiary aggregating \$11,809,000 through December 31, 1978, since the company intends to postpone indefinitely the remittance of such earnings.

The provision for income taxes on continuing operations consists of the following:

	Dollars in Thousands	
For the year	1978	1977
United States current	\$22,687	\$17,432
United States deferred	768	3,000
United States investment tax credit	(2,832)	(2,812)
Amortization of deferred United States investment tax credit arising prior to 1971	(572)	(573)
Foreign	2,862	3,681
State	2,428	1,330
Total Income Taxes	\$25,341	\$22,058

The effective tax rates on continuing operations were 45.5% and 45.8% in 1978 and 1977, respectively. The reasons for the differences from the statutory rate of 48.0% are as follows:

	% of Pre-tax Income	
For the year	1978	1977
Statutory rate	48.0%	48.0%
Increases (decreases) in tax rates resulting from:		
United States investment tax credit	(6.1)	(6.9)
State and local income taxes, net of United States income tax benefit	2.3	1.4
Foreign operations	3.7	5.2
Other - net	(2.4)	(1.9)
Effective tax rate	45.5%	45.8%

The principal sources of United States deferred taxes were:

	Dollars in Thousands	
For the year	1978	1977
Excess of tax depreciation over amount reported in Consolidated Statements of Income	\$2,400	\$2,448
Other - net	(1,632)	552
Total	\$ 768	\$3,000

## 7 Debt and Dividend Restrictions

Short-term debt at December 31, 1978, was \$23,608,000 as compared with an average of \$42,384,000 for the year 1978; the maximum amount of such borrowings which were outstanding at any month-end during 1978 was \$73,532,000. The average interest rate on the year-end balance was 10.7% as compared with an average of 7.9% for the full year.

At December 31, 1978, GAF had unused lines of credit aggregating approximately \$162,000,000. These lines of credit are maintained with various banks on one-year renewable terms expiring on various dates.

Borrowings generally bear interest at or near the prime commercial lending rate or its foreign equivalent. A variable fee, usually based on a percentage of the current prime rate, is paid on the domestic lines of credit. Compensating balances at December 31, 1978 are negligible.

Long-term debt at December 31, 1978 and 1977, was as follows:

	Dollars in Thousands	
	1978	1977
9½% senior notes due March 31, 1991, with equal annual principal repayments beginning March 31, 1982	\$65,000	\$65,000
8½% senior notes due January 15, 1997, with equal annual principal repayments beginning January 15, 1983	40,000	40,000
5½% sinking fund debentures due December 1, 1991, with annual sinking fund payments of \$2,500,000 on each December 1, less \$698,000 and \$1,249,000 held in treasury at December 31, 1978 and 1977, respectively	31,802	33,751
Tax-exempt industrial revenue bonds which bear interest at rates of 3½% to 6½% and mature at various dates to 2002	15,599	16,309
5% convertible subordinated notes due April 1, 1994, with annual repayments beginning April 1, 1990	8,200	8,200
5½% convertible subordinated notes due April 1, 1983, with annual repayments of \$200,000 on each April 1 through 1982 and the balance of \$1,800,000 payable April 1, 1983	2,600	2,800
Other notes which bear interest at 5½% to 12½% and mature at various dates to 1997	13,441	14,832
Obligations under capital leases (See Note 11)	19,803	17,554
Total	196,845	198,446
Less portion due within one year	8,124	6,581
Long-term debt, less current portion	\$188,721	\$191,865

Cash requirements to meet maturing long-term debt obligations over the next five years are:

1979	\$8,124,000	1982	\$14,767,000
1980	\$7,309,000	1983	\$18,307,000
1981	\$8,053,000		

The 5% convertible subordinated notes are convertible into shares of common stock, at any time, at a conversion price of \$27.50 per share (subject to antidilution adjustments in specified circumstances).

The 5½% convertible subordinated notes are presently convertible into shares of common stock at a conversion price of \$28.72 per share (subject to antidilution adjustments in specified circumstances) only in connection with certain prepayments. All other conversion rights lapsed in 1976.

Dividends are restricted under provisions of certain loan agreements. Under the most restrictive of these provisions, retained earnings cannot be reduced below \$261,356,000. Retained earnings at December 31, 1978 were \$285,613,000.

## 8 Capital Stock

The \$1.20 convertible preferred stock, dividends on which are cumulative, is convertible at any time into common stock at the rate of 1¼ shares of common stock for each share of preferred. The company may redeem the preferred stock at \$27.50 per share.

Transactions in common stock held in treasury were as follows:

	Dollars in Thousands	
	1978	1977
Balance, January 1	\$4,438	\$4,338
Purchase of 17,000 shares in 1978 and 19,000 shares in 1977 via stock purchase plan	93	103
Issuance of 392 shares (for unexchanged shares in predecessor companies)	—	(3)
Balance, December 31	\$4,531	\$4,438

As a result of the above issuance of treasury shares during 1977, additional paid-in capital was decreased by \$3,000.

The shares of common stock reserved for issuance at December 31, 1978 and 1977, were as follows:

Reserved for	1978	1977
Conversion of \$1.20 convertible preferred stock	3,882,209	3,882,446
Conversion of convertible subordinated notes	388,711	395,675
Exercise under stock option and purchase plans	1,453,790	1,564,540
Total	5,724,710	5,842,661

## Notes to Consolidated Financial Statements

(continued)

### 9 Stock Option and Stock Purchase Plans

The company's stock option plans provide for the granting of options to key employees to purchase common stock of the company at not less than 100% of the fair market value at the date of grant. Under the terms of the 1975 non-qualified plan, options for 800,000 shares of common stock may be granted during a ten-year period ending February 11, 1985. Options granted to date were exercisable one year after grant and expire after 10 years. Authority to grant options under the 1965 qualified plan expired on March 31, 1975. Options granted under this plan expire five years from the date of grant. Transactions affecting options under these plans are as follows:

	Number of Shares		Average Option Price	
	1978	1977	1978	1977
Outstanding January 1	507,940	293,690	\$10.01	\$11.68
Granted	—	264,000	—	9.63
Exercised	(24,290)	—	9.60	—
Terminated	(79,750)	(49,750)	12.04	17.79
Outstanding December 31	403,900	507,940	9.64	10.01

Options for 548,000 and 536,000 shares were available for grant at December 31, 1978 and 1977, respectively; shares for options exercised in 1978 were delivered in 1979.

Under the provisions of the company's 1969 restricted and unrestricted stock purchase plan, 650,000 shares of common stock were authorized for sale to key employees. The plan currently provides that restricted and unrestricted shares may be sold at prices which are not less than 50% and 80%, respectively, of the closing market price preceding the date on which an employee is designated as one to whom shares may be offered. Under certain conditions, the company has the right to repurchase restricted shares of common stock at the original selling price.

The excess of quoted market value at the date of grant over the aggregate sales price for restricted shares sold is amortized by charges to income over the restriction period. As a result of these charges, additional paid-in capital has been increased by \$90,000 and \$220,000 in 1978 and 1977, respectively. The balance to be amortized through 1984 amounted to \$221,000 and \$393,000 at December 31, 1978 and 1977, respectively.

### 10 Retirement Plans

The cost of employee retirement benefits for continuing operations was \$14,087,000 in 1978 and \$9,437,000 in 1977. At December 31, 1978, the actuarially computed value of vested benefits exceeded the total of pension funds and accrued liabilities for pension cost by \$44,500,000. The estimated unfunded prior service cost at December 31, 1978 was \$59,700,000.

The Salaried Employees' Retirement Plan was amended on January 1, 1978 to improve benefits and to eliminate the employee contribution provision of the plan. The effect of this revision was to increase the 1978 cost by \$3,000,000 and the unfunded vested benefits and unfunded prior service cost

### 11 Commitments and Contingent Liabilities

Capitalized leases of \$18,287,000 and \$15,639,000 are included in Property, Plant and Equipment—Net, at December 31, 1978 and 1977, respectively. The present value of future net minimum lease payments is reflected as long-term debt (see Note 7).

The majority of the capital leases pertain to buildings, the most significant of which is the administrative headquarters located in Wayne, N. J. The amortization associated with assets recorded under capital leases is included in depreciation expense.

The company also has operating leases for transportation, data processing equipment and for other buildings.

A schedule of future minimum lease payments under capital leases and future minimum rental payments required under long-term noncancellable operating leases, as of December 31, 1978, is as follows:

Minimum Payments by Period	Dollars in Thousands	
	Capital Leases	Operating Leases
1979	\$ 2,996	\$10,916
1980	2,958	6,993
1981	2,959	5,925
1982	2,908	4,118
1983	1,967	2,544
Later Years	18,303	6,761
Total minimum payments	\$32,091	\$37,257
Less interest included above	12,288	
Present value of net minimum lease payments	\$19,803	

The company had commitments of approximately \$25,671,000 at December 31, 1978 for the acquisition of property, plant and equipment.

At December 31, 1978, there were certain lawsuits and claims pending against the company. In the opinion of management, the ultimate disposition of these matters will have no material, adverse effect on the company's consolidated financial position.

### 12 Schedule of Business Segments

Information with regard to the company's business segments is presented on page 22. Information regarding 1978 and 1977 is encompassed by the Auditors' Opinion.

### 13 Impact of Inflation (Unaudited)

Reference is made to the company's Annual Report Form 10-K (a copy of which is available on request) for information with respect to the estimated replacement cost of inventories and plant and equipment at December 31, 1978 and 1977, and the related estimated effect of such costs on cost of products sold and depreciation expense for the years then ended.

# 14 Quarterly Financial Data (Unaudited)\*

Dollars in Millions

	1978 By Quarter				1977 By Quarter			
	First	Second	Third	Fourth	First	Second	Third	Fourth
Net Sales	\$229.8	\$279.4	\$278.4	\$275.7	\$203.1	\$242.6	\$239.4	\$234.4
Cost of Products Sold	165.3	202.3	201.5	195.8	146.7	177.6	172.1	168.9
Gross Profit	64.5	77.1	76.9	78.9	56.4	65.0	67.3	65.5
Income from Continuing Operations Before Income Taxes	7.0	14.7	17.6	16.4	11.5**	12.5	14.0***	10.3
Income Taxes	3.0	6.0	8.8	7.5	5.5	5.1	5.6	5.9
Income from Continuing Operations	4.0	8.7	8.8	8.9	6.0	7.4	8.4	4.4
Income (Loss) from Discontinued Segments, Net of Income Taxes	.1	.2	1.0	2.5	(2.4)	(56.9)	—	(13.9)
Net Income (Loss)	4.1	8.9	9.8	11.4	3.6	(49.5)	8.4	(9.5)
Less: Preferred Stock Dividend Requirements	.9	.9	.9	.9	.9	.9	.9	.9
Net Income (Loss) Applicable to Common Stock	\$ 3.2	\$ 8.0	\$ 8.9	\$ 10.5	\$ 2.7	\$ (50.4)	\$ 7.5	\$ (10.4)

Earnings per Common Share:

Dollars

Primary								
Continuing	\$ .23	\$ .59	\$ .59	\$ .60	\$ .39	\$ .48	\$ .57	\$ .26
Discontinued	.01	.01	.08	.18	(.18)	(4.28)	(.01)	(1.05)
Net Income (Loss)	\$ .24	\$ .60	\$ .67	\$ .78	\$ .21	\$ (3.80)	\$ .56	\$ (.79)
Fully Diluted								
Continuing	\$ .23	\$ .50	\$ .51	\$ .52	\$ .35	\$ .43	\$ .48	\$ .26
Discontinued	.01	.01	.06	.13	(.14)	(3.26)	—	(.80)
Net Income (Loss)	\$ .24	\$ .51	\$ .57	\$ .65	\$ .21	\$ (2.83)	\$ .48	\$ (.54)

\*Previously reported amounts have been restated for discontinued segments — See Note 1 of Notes to Consolidated Financial Statements.

\*\* Includes a \$3.7 million (\$1.9 million after tax) payment to the company in connection with a customer's termination of an agricultural chemical contract.

\*\*\* Includes \$2.2 million (\$1.1 million after tax) income from settlement of a law suit in regard to a chlorine caustic facility sold in 1973.

**Deloitte  
Haskins + Sells**

Certified Public Accountants

Two Broadway  
New York, N.Y. 10004

The Shareholders and The Board of Directors of  
GAF Corporation:

We have examined the consolidated balance sheets of GAF Corporation and its consolidated subsidiaries as of December 31, 1978 and 1977 and the related consolidated statements of income, retained earnings, and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, such financial statements present fairly the financial position of the companies at December 31, 1978 and 1977 and the results of their operations and the changes in their financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

*Deloitte Haskins + Sells*

February 5, 1979

# GAF Products and Services

## CHEMICAL PRODUCTS

### GAF® Chemicals

#### High-pressure Acetylene Derivatives

Monomers, polymers, copolymers, solvents, organic intermediates, and specialty chemicals such as Gantrez® hairspray resins, Plasdone® pharmaceutical tablet binder, Polyclar® stabilizer for beer and wine; also other products derived from acetylene for plastic, petroleum, textile, adhesive, and a variety of other industries.

#### Industrial Organic Chemicals

Complex cyclic and aliphatic compounds for use as active ingredients and as intermediates in the dye, pharmaceutical, agricultural, and chemical processing industries.

#### Iron Powders

Microscopic-size spheres of iron used in VHF and UHF circuitry, transmitters, receivers, radar, and in powder metallurgy.

#### Latex Polymers and Compounds

A variety of SBR and other latices, including Gafcote® compounds, for use as binders and coatings on floor coverings, upholstery, textile fabrics, paper and paperboard, nonwovens, and adhesives.

#### Specialty Chemicals

Processing and formulating agents including Gaflex® textile auxiliaries, Biopal® biocides, Gafstat® antistats, flame-retardants for plastics, coating and finishing agents, adhesive additives, Cheelox® sequestrants, Antara® metal lubricants, corrosion inhibitors, flocculants, and solvents for use in various industries and in recycling operations and pollution control. Cepha® plant growth regulator for use on various agricultural crops.

### Surfactants

Nonionic, anionic, cationic, and amphoteric surface-active agents for use as detergents, emulsifiers, dispersants, and wetting agents.

### GAF® Engineering Plastics

Gafite® PBT thermoplastic molding compounds for automobile, mechanical and electrical parts, electrical/electronic components, appliance housings, and business machines.

### GAF® Mineral Products

Mineral granules for roofing and other uses, inert fillers. Dry and saturated felts and mastics for noise absorption and sound barrier applications. Appliance and automotive gasketing materials.

## PHOTO & REPRO PRODUCTS

### GAF® Photo Products

#### Graphic Arts

Gafmate® films and chemicals for offset printing, photolithography, photoengraving, rotogravure, and silk-screen printing. Gaftype™ phototypesetting papers and chemicals.

#### Pictorial Products

View-Master® talking and silent stereo viewers and picture reels; toy slide projectors, Double-Vue™ toy movie viewer and cartridges. Pana-Vue® slide viewers and color slides for educational, entertainment, and commercial uses.

#### Special Photo Products

Aerial film and photographic materials for seismic recording, instrumentation, surveillance, and oscillography.

#### X-ray

Gafmed® medical x-ray films, chemicals, intensifying screens, and cassettes; film for dental radiography; industrial x-ray films and chemicals; radiologic teaching aids.

### GAF® Reprographic Products

#### Audio-visual

Overhead projection transparency series for preschool through college instruction and materials and supplies. Diazo films for preparing overhead projection transparencies and overlays in a variety of colors.

#### Micrographic

Diazo duplicating microfilms and diazo rollfilm duplicators.

### Reproduction

Diazoprinters, accessories, and sensitized materials for engineering and business systems; drafting materials and supplies.

## BUILDING MATERIALS

### GAF® Building Products

#### Insulation Products

Gaftemp® urethane, urethane-perlite, and perlite insulation boards for built-up roofing applications; Gafite™ roof insulation fasteners; building insulation.

#### Roofing Products

Timberline® shingles and other asphalt shingles; roof roofing; built-up roofing felts and asphalts; protective coatings and cements; Mineral-Shield® cold-applied built-up roofing materials.

#### Siding Products

Vanguard® solid vinyl siding for re-siding and new construction; vinyl soffit and fascia systems; decorative shutters.

#### GAF® Floor Products

Gafstar® sheet vinyl flooring and resilient floor tiles for residential and commercial uses. Sure-Stik® adhesive-backed tiles for do-it-yourself market. Flooring felt, accessories, installation tools, adhesives, and floor care products.

#### GAF® Automotive Products

Automotive sound-deadening and insulation products.

## SERVICES

### Chemicals

Custom manufacture of pharmaceutical, agricultural, and other specialty chemicals in developmental and commercial quantities.

### Contract Manufacturing

Precision parts and equipment contract manufacturing service.

### Diazo Equipment Service

Preventive maintenance and repair programs for diazo reproduction equipment.

### Transparencies

Custom overhead transparency service.

# GAF Locations

## Corporate Offices

140 West 51 Street  
New York NY 10020  
212 582 7600

## Domestic Operations

GAF Corporation's plants, research laboratories, sales offices, and distribution centers are located throughout the U.S.A.

### Alabama

Birmingham  
Huntsville  
Mobile

### Arizona

Phoenix

### California

City of Commerce  
La Habra  
Long Beach  
Palo Alto  
San Diego  
South San Francisco

### Colorado

Denver

### District of Columbia

### Florida

Orlando  
Tampa

### Georgia

Atlanta  
Savannah

### Illinois

Bensenville  
Chicago  
Franklin Park  
Joliet  
Lincolnwood

### Indiana

Indianapolis  
Mount Vernon

### Kentucky

Calvert City

### Maryland

Baltimore  
Glen Burnie  
Hagerstown  
Lanham

### Massachusetts

Millis  
Newton

### Michigan

Detroit  
Troy

### Minnesota

Minneapolis

### Missouri

Annapolis  
Kansas City  
St. Louis

### New Jersey

Bound Brook  
Gloucester City  
Linden  
Morristown  
South Bound Brook  
Wayne

### New York

Binghamton  
Elmsford  
Johnson City  
New York  
Vails Gate  
Vestal

### North Carolina

Charlotte

### Ohio

Cincinnati  
Columbus  
Elyria

### Oregon

Progress Portland

### Pennsylvania

Blue Ridge Summit  
Erie  
Frazer  
Whitehall

### South Carolina

Greenville

### Tennessee

Chattanooga  
Memphis

### Texas

Arlington  
Dallas  
Houston  
Texas City

### Utah

Salt Lake City

### Virginia

Chesapeake

### Wisconsin

Pembine

## Domestic Subsidiaries

GAF Broadcasting  
Company, Inc.  
New York, N.Y.

GAF Export  
Corporation  
New York, N.Y.  
Carolina,  
Puerto Rico

GAF Hawaii Inc.  
Honolulu, Hawaii

GAF  
International  
Corporation  
New York, N.Y.

## Major International Manufacturing and Marketing Locations

### Australia

Adelaide  
Brisbane  
Melbourne  
Perth  
Sydney

### Austria

Vienna

### Belgium

Sint-Niklaas

### Brazil

São Paulo

### Canada

Mississauga  
Montreal  
Toronto  
Vancouver

### Denmark

Ballerup

### Finland

Helsinki

### France

Louvres

### Great Britain

Colnbrook  
Hounslow  
Manchester

### Greece

Athens

### Ireland

Dublin  
Mullingar

### Israel

Tel Aviv

### Italy

Milano

### Mexico

Mexico City

### The Netherlands

Deift

### New Zealand

Auckland  
Wellington

### Norway

Oslo

### Singapore

Singapore

### South Africa

Johannesburg

### Spain

Barcelona

### Sweden

Stockholm

### Switzerland

Zug

### West Germany

Frechen

## Affiliates:

**GAF/Hüls Chemie G.m.b.H.**

Marl, West Germany

**Sawyer's Asia Pty. Ltd.**

Bombay, India